



Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

A

THE JOURNAL OF THE ARCHAEOLOGICAL
INSTITUTE OF AMERICA

Archaeological Institute of America

AMERICAN
JOURNAL OF ARCHAEOLOGY

Second Series

THE JOURNAL OF THE ARCHAEOLOGICAL
INSTITUTE OF AMERICA

VOLUME VI

1902



NORWOOD, MASS.

PUBLISHED FOR THE INSTITUTE BY

The Norwood Press

NEW YORK: THE MACMILLAN COMPANY

LONDON: MACMILLAN & CO., LTD.

59404
29/5703

1

Ab
ser. 2
v. 6

American Journal of Archaeology

SECOND SERIES

THE JOURNAL OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

Vol. VI, 1902

Editorial Board

Editor-in-Chief

JOHN HENRY WRIGHT,
Professor in Harvard University.

Associate Editors

J. R. S. STERRETT (*for the American School at Athens*),
Professor in Cornell University.

ALLAN MARQUAND (*for the American School in Rome*),
Professor in Princeton University.

HAROLD N. FOWLER,
Professor in Western Reserve University.

HENRY W. HAYNES,
Late Professor in the University of Vermont.

Honorary Editors

JOHN WILLIAMS WHITE (*President of the Institute*),
Professor in Harvard University.

JAMES R. WHEELER (*Chairman of the Managing Committee
of the School at Athens*),
Professor in Columbia University.

ANDREW F. WEST (*Chairman of the Managing Committee
of the School in Rome*),
Professor in Princeton University.

Business Manager

CLARENCE H. YOUNG,
Adjunct Professor in Columbia University.

Editorial Contributors

Miss MARY H. BUCKINGHAM,
Classical Archaeology.

Professor HARRY E. BURTON,
Roman Archaeology.

Professor JAMES C. EGBERT, JR.,
Roman Epigraphy.

Professor ELMER T. MERRILL,
Roman Archaeology.

Dr. GEORGE N. OLCOTT,
Numismatics.

Professor JAMES M. PATON,
Classical Archaeology.

CONTENTS

	PAGE
Council of the Archaeological Institute of America	xiii
Officers of the Affiliated Societies	xvi
Managing Committee of the School at Athens	xxi
Managing Committee of the School in Rome	xxiii
Managing Committee of the School in Palestine	xxvi
Foreign Honorary Members of the Institute	xxviii
ARCHAEOLOGICAL INSTITUTE OF AMERICA :	
Some Problems in North American Archaeology. — FRANZ BOAS . . .	1
Architectural Refinements in Italian Churches.	
— WILLIAM H. GOODYEAR	166
<i>Investigations at Assos</i>	340
The Stage Entrances of the Small Theatre at Pompeii.	
— FRANCIS W. KELSEY	387
Etruscan Horseshoes from Corneto (Plate XIV).	
— WILLIAM NICKERSON BATES	398
Numismatic Notes: I. A Hoard of Roman Coins from Tarquinii.	
— GEORGE N. OLCOTT	404
On the "Mourning Athena" Relief. — ARTHUR FAIRBANKS . . .	410
<i>The Argive Heraeum</i>	417
THE CRETAN EXPEDITION OF THE INSTITUTE :	
XXI. Gortyna. — ANTONIO TARAMELLI	101
AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS :	
A Series of Colossal Statues at Corinth (Plates I-VI).	
— RUFUS B. RICHARDSON	7
An Ancient Fountain in the Agora at Corinth (Plates VII-X).	
— RUFUS B. RICHARDSON	306
The "Υπαιθρος κρήνη of Pirene (Plates XI, XII).	
— RUFUS B. RICHARDSON	321
The Origin of the Red-figured Technique in Attic Vases.	
— MAY LOUISE NICHOLS	327

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS — *Continued* :

Various Statues from Corinth (Plates XV, XVI).

— JAMES TUCKER, JR. 422

The Lechaëum Road and the Propylæa at Corinth (Plates XVII,

XVIII). — JOSHUA M. SEARS, JR. 439

AMERICAN SCHOOL OF CLASSICAL STUDIES IN ROME :

Studies in the Lives of Roman Empresses : I. Julia Domna.

— MARY GILMORE WILLIAMS 259

AMERICAN SCHOOL OF ORIENTAL STUDY AND RESEARCH IN PAL-
ESTINE :

Remains of a Mediaeval Christian Church at Zer'in (Plate XIII).

— G. SCHUMACHER 338

ARCHAEOLOGICAL NEWS AND DISCUSSIONS (July, 1901–June, 1902) —

H. N. FOWLER, *Editor* :

NOTES OF RECENT EXCAVATIONS AND DISCOVERIES ; OTHER NEWS 55, 343

Oriental, Classical, and Christian Archaeology : — General and Miscellaneous, 55, 343 ; Egypt, 57, 345 ; Babylonia, 60, 348 ; Syria and Palestine, 61, 348 ; Arabia, 350 ; Asia Minor, 63, 350 ; Thrace, 66 ; Thrace and Scythia, 354 ; Greece, 66, 355 ; Italy, 74, 362 ; Spain, 368 ; France, 82, 368 ; Germany, 83, 370 ; Austria, 86 ; Great Britain, 86, 372 ; Africa, 88, 373 ; United States, 375.

Byzantine, Mediaeval, and Renaissance Art : — General and Miscellaneous, 90, 379 ; Palestine, 91 ; Italy, 92, 380 ; Spain, 384 ; France, 95 ; France and Belgium, 384 ; Germany, 97, 384 ; Holland and Belgium, 97 ; Great Britain, 98 ; Austria, 385 ; England, 385.

SUMMARIES OF ARTICLES CHIEFLY IN RECENT PERIODICALS . 197, 455

Oriental, Classical, and Christian Archaeology : — General and Miscellaneous, 197, 455 ; Egypt, 458 ; Asia, 200, 459 ; Greece, 202, 462 (Architecture, 202, 462 ; Sculpture, 203, 463 ; Vases and Painting, 206, 469 ; Inscriptions, 210, 472 ; General and Miscellaneous, 212, 475) ; Italy, 216, 478 (Architecture, 216, 478 ; Sculpture, 216, 479 ; Vases and Painting, 217, 481 ; Inscriptions, 217, 481 ; Coins, 482 ; General and Miscellaneous, 218, 482) ; France, 221, 484 ; Germany, 222 ; Africa, 486 ; Great Britain, 487.

ARCHAEOLOGICAL NEWS AND DISCUSSIONS—*Continued*:

Christian, Byzantine, and Mediaeval Art:—General and Miscellaneous, 223, 487; Italy, 224, 490; France, 225, 491; Spain, 226, 491; Germany, 227; Germany and Austria, 492; Great Britain and Ireland, 228; Africa, 229; England, 492.

Renaissance Art:—Italy, 229, 493; France, 233, 501; Netherlands, 234; Germany, 235; Spain, 236; England, 502.

BIBLIOGRAPHY OF ARCHAEOLOGICAL BOOKS (1901).

—H. N. FOWLER, *Editor* 237

General and Miscellaneous	237
Egyptian Archaeology	241
Oriental Archaeology	241
Classical Archaeology	242
Greek and Roman :	242
Greek, 244 (I, General and Miscellaneous, 244; II, Architecture, 247; III, Sculpture, 247; IV, Vases and Painting, 247; V, Inscriptions, 248; VI, Coins, 248)	244
Roman, 248 (I, General and Miscellaneous, 248; II, Architecture, 251; III, Sculpture, 252; IV, Vases and Painting, 252; V, Inscriptions, 252; VI, Coins, 252)	248
Christian and Later Art	252
(I, General and Miscellaneous, 252; II, Byzantine and Mediaeval, 254; III, Renaissance, 256.)	

Abbreviations used in the News, Discussions, and Bibliography	99
---	----

GENERAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA, NEW YORK, December 26–28, 1901	23
--	----

PROCEEDINGS, WITH TITLES AND BRIEF ABSTRACTS OF PAPERS AND ADDRESSES:—

Address.—JULIUS SACHS	24
A Cylix in the Style of Duris.—J. C. HOPPIN	24
An Ancient Herm from Trachones.—F. C. BABBITT	24
The Reciprocal Influence of the Doric and Ionic Styles in Greek Architecture.—T. W. HEERMANCE	25
Robbia Pavements.—ALLAN MARQUAND	25
Notes: (1) On the DVENOS Inscription; (2) On the so-called <i>Senatusconsultum de Bacchanalibus</i> ; (3) On the Sanction in Legal Inscriptions.—E. S. SHUMWAY	26

	PAGE
On the "Mourning Athena" Relief. — ARTHUR FAIRBANKS	26
Some Statues from Corinth. — JAMES TUCKER, JR.	26
The so-called Restoration of the Parthenon now in Progress. — E. P. ANDREWS	27
The Sanctuary of Zeus Madbachos on the Djebel Shêkh Berekât in Syria. — W. K. PRENTICE	27
Explorations in Mississippi. — CHARLES PEABODY	28
Some Illustrations of Dörpfeld's Ithaca-Leucas Theory. — E. D. PERRY	29
An Ancient Fountain in the Agora of Corinth. — R. B. RICHARDSON	29
Newly Discovered Facts in Regard to the Different Series of Orna- ment Attached to the Architrave of the Parthenon. — E. P. ANDREWS	30
Concerning the Two Temples of Hera at Argos. — E. L. TILTON	32
Some Names found on Coan Inscriptions. — ERNST RIESS	32
(1) A Recently Discovered Phoenician Temple Ruin; (2) A Hoard of Ancient Phoenician Silver Coins. — C. C. TORREY	33
"Calythus" or Calamis: a Note on Paus. X, 13, 10. — ALICE WALTON	34
(1) A Babylonian Deed of Gift from the Sixth pre-Christian Millen- nium; (2) The Haverford Library Collection of Cuneiform Tablets. — G. A. BARTON	35
The Dead who are not Dead. — LUCIA C. G. GRIEVE	37
Ancient Sacrifice among Modern Semites. — S. I. CURTISS	38
Some Archaeological Memoranda made in India. — A. V. W. JACKSON	38
Symbols of Babylonian Gods. — W. H. WARD	39
The Origin of the Red-figured Technique in Attic Vases. — MAY LOUISE NICHOLS	39
Some Terra-cotta Types from the Heraeum. — G. H. CHASE	40
Address. — E. Y. HINCKS	41
Some Problems of American Archaeology. — FRANZ BOAS	41
The Hittite Lituus. — W. H. WARD	41
Figurines from Tell Sandahannah. — T. F. WRIGHT	42
Report of the Board of Managers of the American School in Palestine. — T. F. WRIGHT	43
Report on the Endowment Fund for Exploration and Excavation under the Direction of the School in Palestine. — J. B. NIES	44
The Civilization of Canaan in the Fifteenth Century B.C. — L. B. PATON	44
Some Aspects of the Work of Heinrich Brunn. — J. H. WRIGHT	44
New Observations on Architectural Refinements in Italian Churches. — W. H. GOODYEAR	44
Four Early Palmyraean Inscriptions. — ENNO LITTMANN	44
Fragment of a Treasure-List found in the Acropolis Wall of Athens. — C. N. BROWN	45
The Place of Classical Archaeology in the Secondary School. — ERNST RIESS	46
A Canard, a Quarry, a Query. — K. P. HARRINGTON	46
Notes on the Greek Alphabet. — M. L. EARLE	46
The Credibility of Xenophon's <i>Anabasis</i> . — FITZGERALD TISDALL	47

	PAGE
Report on the Establishment of the Travelling Fellowship in American Archaeology. — F. W. PUTNAM	48
Mycenaean Discoveries at Gournia, in the Neighborhood of Kavousi, Crete. — HARRIET A. BOYD	48
The Pottery at Gournia. — BLANCHE E. WHEELER	49
Roman Church Mosaics of the First Nine Centuries. — W. W. BISHOP	49
The Language and Style of the Preamble of Diocletian's Edict <i>De pretiis Venalium Rerum</i> . — J. C. ROLFE	50
The Runic Inscription on the Anglo-Saxon Sword found on the Isle of Wight. — GEORGE HEMPL	51
The Draped Female Figures from the Acropolis. — An Attempt at Classification. — EDMUND VON MACH	51
Studies in the Life of a Roman Empress. — MARY GILMORE WILLIAMS	52
Heracles Alexicacus. — J. R. WHEELER	53
The Maidens' Race on Attic Vases. — J. W. KYLE	53
Descent reckoned <i>μητρόθεν</i> . — J. R. S. STERRETT	53
Etruscan Horseshoes from Corneto. — W. N. BATES	53
Titles of Papers withdrawn	54

PLATES

	PAGE
I. Colossal Male Figure from Corinth	11
II. Second Colossal Male Figure from Corinth: Head	11
II a. Second Colossal Male Figure from Corinth	11
III. Colossal Female Heads from Corinth	11
IV. Series of Colossal Statues from Corinth: Proposed Foundation for Porch	11
V. Plaque of Coffered Ceiling: Helios and Selene	11
VI. Series of Colossal Figures from Corinth	11
VII. Ancient Fountain at Corinth: View of the Eastern Side	307
VIII. Ancient Fountain at Corinth: View from the South	307
IX. Ancient Fountain at Corinth: Colors of the Triglyphon	307
X. Ancient Fountain at Corinth: Elevation of Interior	307
XI. Pirene in 1901: Ground Plan of Quadrangular Basin	321
XII. Pirene in 1901: Quadrangular Basin	321
XIII. A Mediaeval Church at Zer'in (Jezreel): Ground-Plan	339
XIV. Etruscan Horseshoes from Corneto	398
XV. Colossal Female Figure from Corinth	430
XVI. Second Colossal Female Figure from Corinth	431
XVII. The Lechaëum Road and Propylaea at Corinth: Ground-Plan	439
XVIII. The Lechaëum Road at Corinth: View looking South	439

ILLUSTRATIONS IN TEXT

Fragment of Colossal Male Figure from Corinth	8
Fragment of Colossal Male Figure	9
Corinthian Capital	10
Abacus of a Corinthian Capital	10
Corner Architrave Block	11
Architectural Mouldings	13
Base for Colossal Figure	14
Base for Colossal Figure	15
Architrave Block	18

	PAGE
Cornice Block	19
General Plan of Gortyna	102
Tournefort's View of Gortyna and Acropolis	104
The Acropolis of Gortyna: General Plan	106
Theatre at Gortyna, near the Lethaeus	109
Theatre near the Lethaeus at Gortyna: Section	110
Theatre near the Pythion at Gortyna: Ground-Plan	114
Theatre near the Pythion at Gortyna: Section	115
Bronze Clamps from a Wall near the Pythion	117
Reservoirs for Water, near the Theatre on the Acropolis	119
Probable Course of the Aqueduct of Gortyna	121
The <i>Caput Aquae</i> : Ground-Plan	123
The <i>Caput Aquae</i> : Section	124
The <i>Caput Aquae</i> : Section	124
Aqueduct between Zarò and Gortyna: Water Channel	126
Channel of Aqueduct from Zarò to Gortyna	127
Fountains near a Roman Villa	128
The Route of the Aqueduct near the Acropolis	129
Section of the Aqueduct (Upper)	131
Section of the Aqueduct (Lower)	132
Plan of the Siphon in the Aqueduct near the Lethaeus	133
The Aqueduct on Level Ground	135
Plan of a Ruined Byzantine Church near the Lethaeus	136
Well into the Aqueduct near the Acropolis	138
View of the Polygonal Bastion (from the North)	142
Section of the Circuit Wall of the Acropolis	145
Fragments from the Wall of the Acropolis of Gortyna	149
Plan of the Fort of Koummeh in Egypt	152
Fort of Kom-Ombo in Egypt	153
Plan of the <i>Κάστρο</i> on the Summit of the Acropolis	155
Section of the Walls of the <i>Κάστρο</i> on the Acropolis	156
Tomb of Roman Times on the Acropolis	159
Roman Tomb at Gortyna: Plan and Sections	161
Cloister of the Celestines at Bologna: Horizontal Curves in Plan	169
Cloister of the Celestines at Bologna: Horizontal Curves in Plan	170
Cloister of S. Zeno at Verona: Horizontal Curves in Plan	171
Delicate Vertical Curves in the Pilasters of Chapel Walls in the Cathedral of Vicenza	179
The Outward Spread of the Piers in St. Mark's at Venice	180
S. Agostino at Orvieto	182
Right Aisle of S. Ambrogio, Milan	184
Right Aisle of S. Eustorgio, Milan, looking toward the Façade	185
The Leaning Façade of Pisa Cathedral	187
The Leaning Façade of S. Michele, Pavia	188
The Leaning Façade of S. Michele, Pavia	189
The Leaning Façade of S. Ambrogio, Genoa	191
The Leaning Façade of S. Ambrogio, Genoa	192
Detail of the Façade of St. Mark's, Venice	193

	PAGE
Ancient Fountain at Corinth: Ground-Plan	307
Ancient Fountain at Corinth: Elevation and Profile of the Triglyphon	309
Ancient Fountain: Ground-Plan of Earlier Portion	313
Limestone Plaque in Front of South Face of Triglyphon	317
Lion's Head from the Ancient Fountain	319
Bronze Statue from Ephesus	352
Head of Bronze Statue from Ephesus	353
Plan of the Palace at Chossus	358
Plan of the Small Theatre at Pompeii	388
View of the Small Theatre at Pompeii. From the Inner End of the Left Parodos	390
Exterior of the Basilica at Pompeii, as restored by Professor Mau	392
Detail of the Right End of the Stage with a Periaktes in Position	396
The "Mourning Athena" Stele	412
Lekythos in the National Museum at Athens, with Athena	413
Two Lions' Heads from the Fountain of Glaucus, in Corinth; A Late Male Portrait Head	423
Roman Portrait Statue of a Woman, from Corinth	424
Figure, from Corinth: Fragments	428
Torso of Aphrodite, from Corinth	437
Roman Coins of Corinth, showing Hermes and the Ram	442
Lechaum Road: Remains of Eastern Podium	445
Lechaum Road: Wall to the West of the Platform	447
Roman Imperial Coins, representing the Propylaea at Corinth	450
Mirror-case from Corinth, showing the Propylaea at Corinth	453

Archaeological Institute of America

COUNCIL OF THE INSTITUTE

1902-1903

President

PROFESSOR JOHN WILLIAMS WHITE, PH.D., LL.D., LITT.D., *Harvard University*, of the Boston Society.

Honorary Presidents

PROFESSOR CHARLES ELIOT NORTON, LITT.D., LL.D., D.C.L., *Harvard University*, of the Boston Society.

HON. SETH LOW, LL.D., *New York*, of the New York Society.

Vice-Presidents

MR. CHARLES P. BOWDITCH, A.M., *Boston*, of the Boston Society.

PRESIDENT DANIEL C. GILMAN, LL.D., *Baltimore*, of the Baltimore Society.

PROFESSOR W. J. MCGEE, LL.D., *Bureau of American Ethnology*, of the Washington Society.

MR. MARTIN A. RYERSON, LL.B., *Chicago*, of the Chicago Society.

PROFESSOR THOMAS DAY SEYMOUR, LL.D., *Yale University*, of the Connecticut Society.

Secretary

PROFESSOR FRANCIS W. KELSEY, PH.D., *University of Michigan*, of the Detroit Society.

Treasurer

MR. JAMES H. HYDE, A.B., *120, Broadway, New York*, of the New York Society.

Editor-in-Chief of the Journal

PROFESSOR JOHN HENRY WRIGHT, LL.D., *Harvard University*, of the Boston Society.

Business Manager of the Journal

PROFESSOR CLARENCE H. YOUNG, PH.D., *Columbia University*, of the New York Society.

Other Members of the Council

- MR. CYRUS ADLER, PH.D., *Smithsonian Institution*, of the Washington Society.
- MR. GEORGE A. ARMOUR, A.B., *Princeton*, of the Chicago Society.
- PROFESSOR FRANK COLE BABBITT, PH.D., *Trinity College*, of the Connecticut Society.
- MR. SELDEN BACON, A.M., LL.B., *New York*, of the Wisconsin Society.
- HON. SIMEON E. BALDWIN, LL.D., *Yale University*, President of the New Haven Society.
- PROFESSOR F. O. BATES, *Detroit*, of the Detroit Society.
- MR. GEORGE W. BATES, A.M., *Detroit*, President of the Detroit Society.
- PROFESSOR WILLIAM N. BATES, PH.D., *University of Pennsylvania*, of the Pennsylvania Society.
- PROFESSOR MITCHELL CARROLL, PH.D., *The Columbian University*, of the Washington Society.
- PROFESSOR WALTER DENNISON, PH.D., *University of Michigan*, of the Detroit Society.
- PROFESSOR MARTIN L. D'OOGHE, PH.D., LL.D., LITT.D., *University of Michigan*, of the Detroit Society.
- MR. HOWARD P. EELLS, A.B., *Cleveland*, President of the Cleveland Society.
- PROFESSOR ARTHUR FAIRBANKS, PH.D., *Iowa State University*, President of the Iowa Society.
- HON. JOHN W. FOSTER, LL.D., *Washington*, President of the Washington Society.
- PROFESSOR HAROLD N. FOWLER, PH.D., *Western Reserve University*, of the Cleveland Society.
- PROFESSOR ARTHUR L. FROTHINGHAM, JR., PH.D., *Princeton University*, of the Baltimore Society.
- PROFESSOR BASIL L. GILDERSLEEVE, PH.D., LL.D., D.C.L., *Johns Hopkins University*, President of the Baltimore Society.
- MR. WILLIAM FENWICK HARRIS, A.M., *Harvard University*, of the Boston Society.
- PROFESSOR JOSEPH CLARK HOPPIN, PH.D., *Bryn Mawr College*, President of the Pennsylvania Society.
- MR. CHARLES L. HUTCHINSON, LL.D., *Chicago*, of the Chicago Society.
- MR. JAMES LOEB, A.B., *New York*, of the New York Society.
- REV. WALTER LOWRIE, A.M., *Philadelphia*, of the Pennsylvania Society.
- PROFESSOR J. H. T. MAIN, PH.D., *Iowa College*, of the Iowa Society.
- PROFESSOR W. G. MANLY, A.M., *University of Missouri*, President of the Missouri Society.
- MR. THEODORE MARBURG, *Baltimore*, of the Baltimore Society.
- PROFESSOR ALLAN MARQUAND, PH.D., L.H.D., *Princeton University*, of the New York Society.
- MISS ELLEN F. MASON, *Boston*, of the Boston Society.
- PROFESSOR GEORGE F. MOORE, D.D., *Harvard University*, of the Boston Society.
- PROFESSOR EDWARD DELAVAN PERRY, PH.D., *Columbia University*, of the New York Society.

- MR. FREDERIC J. DE PEYSTER, A.M., LL.B., *New York*, of the New York Society.
- PROFESSOR SAMUEL BALL PLATNER, Ph.D., *Western Reserve University*, of the Cleveland Society.
- MR. EDWARD ROBINSON, A.B., *Boston*, of the Boston Society.
- PROFESSOR JULIUS SACHS, Ph.D., *New York*, President of the New York Society.
- PROFESSOR F. W. SHIPLEY, Ph.D., *Washington University*, of the Missouri Society.
- PROFESSOR CHARLES FORSTER SMITH, Ph.D., *University of Wisconsin*, President of the Wisconsin Society.
- PROFESSOR FRANK B. TARBELL, Ph.D., *University of Chicago*, President of the Chicago Society.
- PROFESSOR FITZGERALD TISDALL, Ph.D., *College of the City of New York*, of the New York Society.
- PROFESSOR CHARLES C. TORREY, Ph.D., *Yale University*, of the Connecticut Society.
- PROFESSOR ALICE WALTON, Ph.D., *Wellesley College*, of the Boston Society.
- PROFESSOR ANDREW F. WEST, Ph.D., LL.D., *Princeton University*, of the New York Society.
- PROFESSOR JAMES R. WHEELER, Ph.D., *Columbia University*, of the New York Society.
- MRS. H. WHITMAN, *Boston*, President of the Boston Society.
- PROFESSOR THEODORE F. WRIGHT, Ph.D., *Cambridge*, of the Boston Society.

**Affiliated Societies
of the Archaeological
Institute of America**

OFFICERS OF THE SOCIETIES

1902-1903

BOSTON SOCIETY

President

MRS. H. WHITMAN.

Vice-President

PROFESSOR HENRY W. HAYNES, A.M.

Secretary

MR. ERNEST JACKSON, A.M.

Treasurer

MR. GARDINER M. LANE, A.B.

NEW YORK SOCIETY

President

PROFESSOR JULIUS SACHS.

Vice-Presidents

DR. MORRIS K. JESUP.

REV. JOHN P. PETERS, Ph.D., Sc.D., D.D.

RT. REV. HENRY C. POTTER, S.T.D., LL.D.

PROFESSOR WILLIAM R. WARE, LL.D.

MR. HORACE WHITE, LL.D.

Secretary

PROFESSOR NELSON G. McCREA, Ph.D.

Treasurer

MR. EDWARD L. TILTON.

BALTIMORE SOCIETY

President

PROFESSOR BASIL L. GILDERSLEEVE, PH.D., LL.D., D.C.L.

Vice-Presidents

MR. MENDES COHEN.

MISS ALICE C. FLETCHER.

PRESIDENT DANIEL C. GILMAN, LL.D.

MR. WILLIAM W. SPENCE.

Secretary

PROFESSOR KIRBY F. SMITH, PH.D.

Treasurer

MR. EDGAR G. MILLER.



PENNSYLVANIA SOCIETY

President

PROFESSOR JOSEPH CLARK HOPPIN, PH.D.

Vice-Presidents

MRS. CORNELIUS STEVENSON, Sc.D.

PROFESSOR HERMAN V. HILPRECHT, PH.D., D.D., LL.D.

Secretary and Treasurer

PROFESSOR WILLIAM N. BATES, PH.D.



CHICAGO SOCIETY

President

PROFESSOR FRANK BIGELOW TARBELL, PH.D.

Vice-Presidents

MR. JOHN J. GLESSNER.

HON. FRANKLIN MACVEAGH, A.B., LL.B.

Secretary

PROFESSOR CLARENCE F. CASTLE, PH.D.

Treasurer

PROFESSOR EDWARD CAPPS, PH.D.

DETROIT SOCIETY**President**

MR. GEORGE WILLIAMS BATES, A.M.

Vice-Presidents

PROFESSOR MARTIN L. D'OOGHE, PH.D., LL.D., LITT.D.

COL. FRANK J. HECKER.

HON. WILLIAM E. QUINBY.

Secretary and Treasurer

MR. PERCY IVES.

WISCONSIN SOCIETY**President**

PROFESSOR CHARLES FORSTER SMITH, PH.D.

Vice-President

MISS ALICE G. CHAPMAN.

Secretary and Treasurer

PROFESSOR MOSES STERHEN SLAUGHTER, PH.D.

CLEVELAND SOCIETY**President**

MR. HOWARD P. EELLS, A.B.

Vice-President

MR. MALCOLM S. GREENOUGH, A.B.

Secretary and Treasurer

PROFESSOR HAROLD NORTH FOWLER, PH.D.

CONNECTICUT SOCIETY

President

HON. SIMEON E. BALDWIN, LL.D.

Vice-Presidents

PROFESSOR TRACY PECK, A.M.

PROFESSOR JAMES M. PATON, PH.D.

Secretary and Treasurer

PROFESSOR HORATIO M. REYNOLDS, A.M.



MISSOURI SOCIETY

President

PROFESSOR W. G. MANLY, A.M.

Vice-Presidents

HON. GARDNER LATHROP, LL.B.

PROFESSOR F. W. SHIPLEY, PH.D.

Secretary

MR. C. E. MILLER.

Treasurer

PROFESSOR W. E. GRUBE, A.M.



WASHINGTON SOCIETY

President

HON. JOHN W. FOSTER, LL.D.

Vice-Presidents

RT. REV. THOMAS J. CONATY, D.D.

PRESIDENT SAMUEL H. GREENE, D.D., LL.D.

PROFESSOR WILLIAM HENRY HOLMES.

PRESIDENT CHARLES W. NEEDHAM, LL.D.

MRS. ELIZABETH J. SOMERS, M.A.

Secretary

PROFESSOR MITCHELL CARROLL, PH.D.

Treasurer

MR. JOHN B. LARNER, LL.B.

IOWA SOCIETY

President

PROFESSOR ARTHUR FAIRBANKS, PH.D.

Vice-Presidents

PROFESSOR J. H. T. MAIN, PH.D.

PROFESSOR W. H. EBERSOLE, A.M.

Secretary and Treasurer

MRS. MAX MAYER.

American School
of Classical Studies
at Athens

MANAGING COMMITTEE

1902-1903

Chairman

PROFESSOR JAMES R. WHEELER, PH.D., of Columbia University.

Secretary

PROFESSOR HORATIO M. REYNOLDS, A.M., of Yale University.

Treasurer

MR. GARDINER M. LANE, A.B., of Boston.

- PROFESSOR H. M. BAIRD, D.D., LL.D., of New York University.
PROFESSOR WILLIAM N. BATES, PH.D., of the University of Pennsylvania.
PROFESSOR A. C. CHAPIN, A.M., of Wellesley College.
PROFESSOR EDWARD B. CLAPP, PH.D., of the University of California.
PROFESSOR MARTIN L. D'OOGHE, PH.D., LL.D., LITT.D., of the University
of Michigan.
PROFESSOR EDGAR A. EMENS, A.M., of Syracuse University.
PROFESSOR HAROLD N. FOWLER, PH.D., of Western Reserve University.
PROFESSOR ABRAHAM L. FULLER, PH.D., of Adelbert College of West-
ern Reserve University.
PROFESSOR HENRY GIBBONS, PH.D., of the University of Pennsylvania.
PROFESSOR BASIL L. GILDERSLEEVE, PH.D., LL.D., D.C.L., of Johns
Hopkins University.
PROFESSOR WILLIAM W. GOODWIN, PH.D., LL.D., D.C.L., of Harvard
University.
PROFESSOR WILLIAM GARDNER HALE, LL.D., of the University of Chi-
cago.
PROFESSOR ALBERT HARKNESS, PH.D., LL.D., of Brown University.
PROFESSOR JOHN H. HEWITT, LL.D., of Williams College.
PROFESSOR JOSEPH CLARK HOPPIN, PH.D., of Bryn Mawr College.
PROFESSOR GEORGE E. HOWES, PH.D., of the University of Vermont.
PROFESSOR WILLIAM A. LAMBERTON, LITT.D., of the University of
Pennsylvania.
PROFESSOR ABBY LEACH, A.M., of Vassar College.
PROFESSOR GEORGE DANA LORD, A.M., of Dartmouth College.

MISS ELLEN F. MASON, of Boston.

PROFESSOR GEORGE F. MOORE, D.D. (*ex officio*, as Chairman of the Managing Committee of the School in Palestine), of Harvard University.

PROFESSOR CHARLES ELIOT NORTON, Litt.D., LL.D., D.C.L., of Harvard University.

PROFESSOR BERNADOTTE PERRIN, Ph.D., LL.D., of Yale University.

PROFESSOR EDWARD DELAVAN PERRY, Ph.D., of Columbia University.

MR. FREDERIC J. DE PEYSTER, A.M., LL.B., of New York.

PROFESSOR WILLIAM CAREY POLAND, A.M., of Brown University.

PROFESSOR W. K. PRENTICE, Ph.D., of Princeton University.

PROFESSOR LOUISE F. RANDOLPH, of Mt. Holyoke College.

PROFESSOR RUFUS B. RICHARDSON, Ph.D. (*ex officio*, as Director of the School), of Athens.

PROFESSOR H. N. SANDERS, A.B., of Bryn Mawr College.

PROFESSOR THOMAS DAY SEYMOUR, LL.D., of Yale University.

PROFESSOR PAUL SHOREY, Ph.D. of the University of Chicago.

PROFESSOR H. DEF. SMITH, A.M., of Amherst College.

PROFESSOR HERBERT WEIR SMYTH, Ph.D., of Harvard University.

PROFESSOR J. R. SITLINGTON STERRETT, Ph.D., of Cornell University.

PROFESSOR FRANK B. TARBELL, Ph.D., of the University of Chicago.

PROFESSOR FITZGERALD TISDALL, Ph.D., of the College of the City of New York.

PROFESSOR HENRY M. TYLER, A.M., of Smith College.

PROFESSOR WILLIAM R. WARE, LL.D., of Columbia University.

PROFESSOR ANDREW F. WEST, Ph.D., LL.D. (*ex officio*, as Chairman of the Managing Committee of the School in Rome), of Princeton University.

PRESIDENT BENJAMIN IDE WHEELER, Ph.D., LL.D., of the University of California.

PROFESSOR JOHN WILLIAMS WHITE, Ph.D., LL.D., Litt.D. (*ex officio*, as President of the Institute), of Harvard University.

PROFESSOR SAMUEL ROSS WINANS, Ph.D., of Princeton University.

PROFESSOR JOHN HENRY WRIGHT, LL.D. (*ex officio*, as Editor-in-Chief of the Journal of the Institute), of Harvard University.

American School
of Classical Studies
in Rome

MANAGING COMMITTEE

1902-1903

Chairman

PROFESSOR ANDREW F. WEST, Ph.D., LL.D., of Princeton University.

Secretary

PROFESSOR SAMUEL BALL PLATNER, Ph.D., of Western Reserve University.

Treasurer

MR. C. C. CUYLER, A.B., of New York.

PROFESSOR FRANK FROST ABBOTT, Ph.D., of the University of Chicago.

Mrs. WILLIAM F. ALLEN, of Madison.

MR. ALLISON V. ARMOUR, A.B., of New York.

MR. GEORGE A. ARMOUR, A.B., of Princeton.

PROFESSOR SIDNEY G. ASHMORE, L.H.D., of Union University.

MR. ROBERT BACON, A.B. (*ex officio*, as Trustee of the School), of New York.

PROFESSOR G. E. BARBER, A.M., of the University of Nebraska.

PROFESSOR H. J. BARTON, A.M., of the University of Illinois.

PROFESSOR CHARLES E. BENNETT, A.B., of Cornell University.

Mrs. EMMONS BLAINE, of Chicago.

PROFESSOR D. BONBRIGHT, LL.D., of Northwestern University.

PROFESSOR J. EVERETT BRADY, Ph.D., of Smith College.

MR. WILLIAM H. BUCKLER, of Baltimore.

PROFESSOR HENRY F. BURTON, A.M., of the University of Rochester.

PROFESSOR J. S. CLARK, A.B., of the University of Minnesota.

RT. REV. MGR. THOMAS J. CONATY, D.D., Rector of the Catholic University of America.

MR. FREDERIC R. COUDERT, J.U.D., LL.D., of New York.

PROFESSOR W. L. COWLES, A.M., of Amherst College.

PROFESSOR A. N. CURRIER, LL.D., of the State University of Iowa.

HON. HORACE DAVIS, LL.D., of San Francisco.

PROFESSOR S. C. DERBY, A.M., of the Ohio State University.

PROFESSOR JAMES H. DILLARD, Litt.D., of Tulane University.

RT. REV. WILLIAM C. DOANE, D.D., LL.D., Bishop of Albany.

PROFESSOR MORTIMER LAMSON EARLE, Ph.D., of Barnard College.

PROFESSOR JAMES C. EGBERT, JR., Ph.D., of Columbia University.

MR. LOUIS R. EHRLICH, A.M., of Colorado Springs.

PROFESSOR ALFRED EMERSON, Ph.D., of the University of California.

PROFESSOR HENRY P. EMERSON, A.M., of Buffalo.

PROFESSOR HAROLD N. FOWLER, Ph.D., of Western Reserve University.

PROFESSOR ARTHUR L. FROTHINGHAM, JR., Ph.D., of Princeton University.

HIS EMINENCE CARDINAL JAMES GIBBONS, of Baltimore.

MR. SAMUEL S. GREEN, A.M., of Worcester.

PROFESSOR ALFRED GUDEMAN, Ph.D., of Cornell University.

PROFESSOR WILLIAM GARDNER HALE, LL.D., of the University of Chicago.

PROFESSOR ALBERT G. HARKNESS, A.M., of Brown University.

PROFESSOR KARL POMEROY HARRINGTON, A.M., of the University of Maine.

PROFESSOR SAMUEL HART, D.D., D.C.L., of the Berkeley Divinity School.

PROFESSOR ADELINE BELLE HAWES, A.M., of Wellesley College.

PROFESSOR G. L. HENDRICKSON, A.B., of the University of Chicago.

PROFESSOR CHARLES G. HERBERMANN, Ph.D., LL.D., of the College of the City of New York.

PROFESSOR JOHN H. HEWITT, LL.D., of Williams College.

RABBI EMIL G. HIRSCH, Ph.D., LL.D., of Chicago.

PROFESSOR WILLIAM A. HOUGHTON, A.M., of Bowdoin College.

MR. CHARLES L. HUTCHINSON, LL.D., of Chicago.

MR. JAMES H. HYDE, A.B. (*ex officio*, as Trustee of the School), of New York.

PROFESSOR GEORGE E. JACKSON, A.M., of Washington University.

PROFESSOR H. W. JOHNSTON, Ph.D., of the Indiana University.

PROFESSOR J. C. JONES, Ph.D., of the University of Missouri.

RT. REV. MGR. J. J. KEANE, D.D., Archbishop of Damascus.

PROFESSOR FRANCIS W. KELSEY, Ph.D., of the University of Michigan.

CHANCELLOR J. H. KIRKLAND, Ph.D., of Vanderbilt University.

HON. ERNEST B. KRUTTSCHNITT, A.M., of New Orleans, La.

COMMENDATORE PROFESSORE RODOLFO LANCIANI, of the University of Rome.

MR. GARDINER M. LANE, A.B., of Boston.

MR. ELLIOT C. LEE, A.B. (*ex officio*, as Trustee of the School), of Boston.

REV. CHARLES STANLEY LESTER, D.D., of Milwaukee.

PROFESSOR T. B. LINDSAY, Ph.D., of Boston University.

PROFESSOR GONZALEZ LODGE, Ph.D., of the Teachers' College, New York City.

PROFESSOR JOHN K. LORD, Ph.D., of Dartmouth College.

PROFESSOR ARTHUR C. MCGIFFERT, D.D., of Union Theological Seminary.

PROFESSOR ALLAN MARQUAND, Ph.D., L.H.D., of Princeton University.

PROFESSOR WILLIAM A. MERRILL, Ph.D., L.H.D., of the University of California.

PROFESSOR GEORGE F. MOORE, D.D. (*ex officio*, as Chairman of the Managing Committee of the School in Palestine), of Harvard University.

PROFESSOR J. LEVERETT MOORE, Ph.D., of Vassar College.

REV. R. J. NEVIN, D.D., Rector of the American Church in Rome.

- MR. CLEMENT NEWBOLD (*ex officio*, as Trustee of the School), of Philadelphia.
- PROFESSOR RICHARD NORTON, A.B. (*ex officio*, as Director of the School), Rome, Italy.
- RT. REV. MGR. O'CONNELL, Bishop of Portland.
- PROFESSOR E. M. PEASE, Ph.D., of Washington.
- PROFESSOR TRACY PECK, A.M., of Yale University.
- PROFESSOR W. E. PETERS, LL.D., of the University of Virginia.
- PROFESSOR JOHN WINTHROP PLATNER, D.D., of Andover Theological Seminary.
- PROFESSOR EDWIN POST, Ph.D., of De Pauw University.
- RT. REV. HENRY C. POTTER, D.D., LL.D., Bishop of New York.
- HON. WILLIAM POTTER, of Chestnut Hill.
- PROFESSOR JOHN C. ROLFE, Ph.D., of the University of Pennsylvania.
- HON. J. G. SCHMIDLAPP, of Cincinnati.
- PROFESSOR EDWIN R. A. SELIGMAN, LL.B., Ph.D., of Columbia University.
- PROFESSOR EDGAR S. SHUMWAY, Ph.D., of Brooklyn.
- PROFESSOR M. S. SLAUGHTER, Ph.D., of the University of Wisconsin.
- PROFESSOR FRANK SMALLEY, Ph.D., of Syracuse University.
- PROFESSOR CLEMENT L. SMITH, LL.D., of Harvard University.
- PROFESSOR KIRBY F. SMITH, Ph.D., of Johns Hopkins University.
- PROFESSOR W. O. SPROULL, Ph.D., LL.D., L.H.D., of Cincinnati.
- MR. GEORGE R. STETSON, of Washington.
- MRS. CORNELIUS STEVENSON, Sc.D., of Philadelphia.
- MR. WALDO STORY, A.M., of Rome.
- PROFESSOR LEWIS STUART, A.M., of Lake Forest University.
- MR. THOMAS THACHER, A.B. (*ex officio*, as Trustee of the School), of New York.
- PROFESSOR HENRY VAN DYKE, D.D., of Princeton University.
- COMMENDATORE PROFESSORE ADOLFO VENTURI, Director-General of the National Galleries of Italy.
- REV. MARVIN R. VINCENT, D.D., of the Union Theological Seminary.
- PROFESSOR ARTHUR T. WALKER, A.M., of the University of Kansas.
- PROFESSOR WILLIAM R. WARE, LL.D., of Columbia University.
- PROFESSOR MINTON WARREN, Ph.D., LL.D., of Harvard University.
- HON. II. B. WENZEL, A.B., LL.B., of St. Paul.
- PROFESSOR ARTHUR L. WHEELER, Ph.D., of Bryn Mawr College.
- PROFESSOR JAMES R. WHEELER, Ph.D. (*ex officio*, as Chairman of the Managing Committee of the School at Athens), of Columbia University.
- PROFESSOR JOHN WILLIAMS WHITE, Ph.D., LL.D., Litt.D. (*ex officio*, as President of the Institute), of Harvard University.
- MRS. HENRY WHITMAN, of Boston.
- VICE-CHANCELLOR B. L. WIGGINS, A.M., of the University of the South.
- PROFESSOR MARY G. WILLIAMS, Ph.D., of Mt. Holyoke College.
- PROFESSOR JOHN HENRY WRIGHT, LL.D. (*ex officio*, as Editor-in-Chief of the Journal of the Institute), of Harvard University.

American School
for Oriental Study and Research
in Palestine

MANAGING COMMITTEE

1902-1903

Chairman

PROFESSOR GEORGE F. MOORE, D.D., of Harvard University.

Secretary

PROFESSOR THEODORE F. WRIGHT, Ph.D., of Cambridge.

REV. JOHN P. PETERS, Ph.D., Sc.D., D.D., of New York.

PROFESSOR CHARLES C. TORREY, Ph.D., of Yale University.

REV. WILLIAM HAYES WARD, D.D., LL.D., of New York.

PROFESSOR JOHN WILLIAMS WHITE, Ph.D., LL.D., Litt.D. (*ex officio*,
as President of the Institute), of Harvard University.

BOARD OF COUNCILLORS

REPRESENTATIVES OF THE FOLLOWING INSTITUTIONS:

ANDOVER THEOLOGICAL SEMINARY.

AUBURN THEOLOGICAL SEMINARY.

BOSTON UNIVERSITY.

BROWN UNIVERSITY.

BRYN MAWR COLLEGE.

COLGATE UNIVERSITY.

COLUMBIA UNIVERSITY.

CORNELL UNIVERSITY.

EPISCOPAL THEOLOGICAL SCHOOL, *Cambridge*.

GENERAL THEOLOGICAL SEMINARY, *New York*.

HARVARD UNIVERSITY.

HEBREW UNION COLLEGE, *Cincinnati*.

JOHNS HOPKINS UNIVERSITY.

MCCORMICK THEOLOGICAL SEMINARY.

NEW YORK UNIVERSITY.

PRINCETON THEOLOGICAL SEMINARY.

PRINCETON UNIVERSITY.

TRINITY COLLEGE.

UNION THEOLOGICAL SEMINARY, *New York*.

UNIVERSITY OF PENNSYLVANIA.

YALE UNIVERSITY.

AND THE FOLLOWING INDIVIDUALS:

PRESIDENT JAMES B. ANGELL, D.D., LL.D., of the University
of Michigan.

REV. E. T. BARTLETT, D.D., of Philadelphia.

MR. JAMES C. CARTER, LL.D., of New York.

HON. T. JEFFERSON COOLIDGE, A.M., of Boston.

MISS MARIA L. CORLISS, of Providence.

PRESIDENT DANIEL C. GILMAN, LL.D., of Baltimore.

MR. JAMES LOEB, A.B., of New York.

MR. J. PIERPONT MORGAN, of New York.

MR. M. TAYLOR PYNE, A.M., LL.B., of Princeton.

REV. EDWARD S. ROUSMANIERE, A.M., of Providence.

MR. JACOB H. SCHIFF, LL.D., of New York.

Archaeological
Institute
of America

FOREIGN HONORARY MEMBERS

PROFESSOR ALEXANDER CONZE, PH.D., *German Imperial Archaeological Institute, Berlin.*

PROFESSOR WILHELM DÖRPFELD, PH.D., LL.D., *German Imperial Archaeological Institute, Athens.*

PROFESSOR PERCY GARDNER, LITT.D., *University of Oxford.*

SIR RICHARD JEBB, LITT.D., D.C.L., LL.D., M.P., *University of Cambridge.*

PROFESSOR GASTON MASPERO, D.C.L., *Collège de France, Paris.*

PROFESSOR THEODOR MOMMSEN, PH.D., J.U.D., *University of Berlin.*

CONTENTS

	PAGE
ARCHAEOLOGICAL INSTITUTE OF AMERICA:	
SOME PROBLEMS IN NORTH AMERICAN ARCHAEOLOGY .	
Franz Boas	1
AMERICAN SCHOOL AT ATHENS:	
A SERIES OF COLOSSAL STATUES AT CORINTH (Plates I-VI)	
Rufus B. Richardson	7
ARCHAEOLOGICAL INSTITUTE OF AMERICA:	
PROCEEDINGS OF THE GENERAL MEETING, New York, De-	
cember 26-28, 1901	23

PLATES

- I. Colossal Male Figure from Corinth.
- II. Second Colossal Male Figure from Corinth; Head.
- II A. Second Colossal Male Figure from Corinth.
- III. Colossal Female Heads from Corinth.
- IV. Series of Colossal Statues from Corinth. (From the drawing
by Hjalvor Bagge.)
- V. Plaque of Coffered Ceiling: Helios and Selene.
- VI. Series of Colossal Figures from Corinth.

ARCHAEOLOGICAL NEWS (July-December, 1901)	
Harold N. Fowler, <i>Editor</i> .	55

NOTES OF RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS:

Oriental, Classical, and Christian Archaeology:—General and Miscellaneous, 55; Egypt, 57; Babylonia, 60; Syria and Palestine, 61; Asia Minor, 63; Thrace, 66; Greece, 66; Italy, 74; France, 82; Germany, 83; Austria, 86; Great Britain, 86; Africa, 88.

Byzantine, Mediaeval, and Renaissance Art:—General and Miscellaneous, 90; Palestine, 91; Italy, 92; France, 95; Germany, 97; Holland and Belgium, 97; Great Britain, 98.

SOME PROBLEMS IN NORTH AMERICAN ARCHAEOLOGY.

IN the study of American archaeology we are compelled to apply methods somewhat different from those used in the archaeology of the Old World. While the archaeology of the Mediterranean country and of a large portion of Asia deals with the early remains of peoples who possessed a literature, and whose history is partly known from literary sources, we find in America, almost exclusively, remains of people unfamiliar with the art of writing, and whose history is entirely unknown. The problem, therefore, with which we are dealing is allied to the problem of the prehistoric archaeology of the Old World. The method that is pursued in dealing with the ancient remains of the lake-dwellers, of the kitchen-middens, and of other prehistoric sites, of which we have no literary knowledge, must be pursued in investigations in American archaeology. But even in this case the conditions are not quite comparable. The ancient culture of the people who left their remains in Europe has completely disappeared, and has given way to civilization of modern type. It seems probable that the remains found in most of the archaeological sites of America were left by a people similar in culture to the present Indians. For this reason, the ethnological study of the Indians must be considered as a powerful means of elucidating the significance of archaeological remains. It is hardly possible to understand the significance of American archaeological remains without having recourse to ethnological observations, which frequently explain the significance of prehistoric finds.

It is only in Central America, and, to a certain extent, in western South America, that the archaeological remains have a character similar to those of the Mediterranean area. Only in these regions do we find ruined buildings and monuments that bear inscriptions that may, perhaps, serve to explain their significance.

The problems of American archaeology deal principally with the earliest history of the inhabitants of this country. In some cases the results of archaeological investigation indicate to us fundamental changes in the state of culture prevailing in certain areas, and even demonstrate the migrations of certain tribes. I wish to call the reader's attention in this article to some problems of this character that are met with on the Pacific Coast of our continent.

At the present time the Pacific Coast of North America is inhabited by an enormous number of tribes, diverse in culture. The present distribution of languages suggests that, in early times, extensive migrations must have taken place. The most remarkable fact that we observe in the distribution of languages is the occurrence of a number of isolated points in which Athapascan dialects are spoken. Athapascan is the prevailing language of the whole interior of Alaska and of the Mackenzie basin. It occupies the whole northwestern part of our continent, as far south as a line drawn west from Hudson Bay to the Rocky Mountains.

South of this line a large number of small tribes are met with, speaking Athapascan dialects. All of these are located near the Pacific Coast, in British Columbia, Washington, Oregon, and California. In the far south we meet, again, with a large body of Athapascan tribes, consisting principally of the Navaho and Apache. This peculiar distribution of the Athapascan language, in connection with the irregular distribution of other languages, makes it quite certain that great disturbances must have taken place in that area. In regard to culture we may distinguish four fundamental types on the Pacific Coast,—the Eskimo of the Arctic, the Indian of

Alaska and British Columbia, the type of culture of Columbia River, and that of California. I will not enter into a detailed description of these types of culture. The line between the Eskimo type in the north and the Alaskan Indian type is quite sharp, while the other groups gradually merge into each other.

The distribution of physical types also proves the great diversity in the origin of the tribes of the North Pacific Coast. It is not possible at present to affiliate each type definitely with other known types, but the diversity of form found in the Coast types between Alaska and Southern California is so great that we must suppose that the diversity is a very ancient one.

It is possible to follow, to a certain extent, the history of this area by ethnological methods. When we find certain customs distributed over a definite continuous area, and absent in others, we may suppose that they originated among the people inhabiting this district. In this manner, the study of the ethnological distribution of customs and beliefs may, to a certain extent, clear up the history of tribes.

The study of the beliefs and traditions of the Eskimo of Alaska shows that the fundamental features of their beliefs are common to them and to the Eastern Eskimo, and makes it quite certain that these beliefs must have been the ancient property of the Eskimo. The culture of the Alaskan Eskimo shows, however, certain remarkable differences from the culture of the Eastern Eskimo tribes. All of these features can be explained as due to the influence of the Indians of Alaska, so that we are justified in drawing the inference, in this case, that the whole Eskimo culture has been modified by a later influence. When we follow the Pacific Coast southwest, we find that a sudden change in customs, beliefs, and folklore takes place near the central part of the coast of British Columbia, and that particularly the Tsimshian, of the tribes of this area, show a great many features that differentiate them from other neighboring tribes, so that we may conclude that they are, practically speaking, new arrivals in this district. It can also be shown that the Columbia River must have been one

of the great routes along which Eastern influences were imported on the Pacific Coast. The mythology of the tribes living at the mouth of the Columbia River shows a very great number of elements which can have had their origin only east of the Rocky Mountains. Evidently an old connection between the Pacific Coast and the East has existed here for a very long time. Naturally it is impossible to utilize historical traditions of the tribes for the construction of their history, because all of them are more or less of a mythical character. It is possible to reconstruct the history only by a comparative study of all the elements of their culture.

The study of the ethnology of this region shows, therefore, clearly, that there have been great changes in the distribution of the tribes, but it seems impossible to unravel the early history of these changes. The question, accordingly, arises, In how far can archaeological methods supplement ethnological information? There are two places particularly at which these investigations seem to give promising results. The distribution of languages and customs in Southern British Columbia makes it clear that here important dislocations must have taken place. I pointed out before that the Columbia River must have been the course along which Eastern culture was imported to the Pacific Coast. And finally we may seek by archaeological methods a solution of the question regarding the early influence of the Indian upon the Eskimo.

The archaeology of Southern British Columbia, the first of the areas which I mentioned here, has been investigated in some detail. This work has been done for the Jesup North Pacific Expedition of the American Museum of Natural History, under the direction of Mr. Harlan I. Smith. His investigations prove clearly, that not only have the customs of the people undergone material changes, but also that in early times an entirely different type of man inhabited the area in question. At present the Indians bury their dead in boxes, which are either placed in trees or deposited in caves. In olden times the method of burial was to construct large stone

cairns with a central chamber for the bodies. The peculiar style of carving found in prehistoric remains is in some respects similar to the style of carving found on the plateaus of British Columbia. Pipes are found here which in their type are identical with those of the inland and of the plateaus farther to the south. It is difficult to identify the prehistoric type of this district with any other known type of the Pacific Coast, but its affiliations are decidedly more with the people of the interior and of the Columbia River than with the present inhabitants of the coast of British Columbia.

It would seem from all this, that in early times the affiliation between the coast and the interior was very much closer than it is now, and this fact is in accord with the distribution of languages in this area. One and the same linguistic stock inhabits the interior of British Columbia and Washington, and the coasts of Washington and of Southern British Columbia. Although the stock is divided into a great many different languages, their affinities are quite clear. The archaeological finds make it probable that this stock was in later times assimilated by the northern coast tribes in bodily form as well as in culture.

The archaeology of Alaska offers a problem that is no less interesting. If it is true that the ancient culture of the Eskimo of this district has been affected by the Indians, the question arises, whether the Eskimo were the original inhabitants of this district. There are weighty reasons which seem to favor the theory that in former times this country was inhabited by different tribes. A study of the ethnology of the tribes of Northeastern Siberia seems to reveal the fact that these tribes are more closely associated in culture and in physical form with the Indians of the North Pacific Coast than with the Eskimo of Alaska. If this is true, the inference seems justifiable that the Eskimo are recent intruders in this district. It is not probable that the Eskimo tribes of Alaska can be considered as Eskimo of pure descent, because in them the most characteristic physical features of that type are much weak-

ened. The height of skull, length of skull, and width of face—which must be considered the fundamental characteristics of the Eskimo tribe—are not as marked here as they are farther to the east.

Attention may also be called to the curious distribution of the art of pottery in this area. At the present time, pottery is made only by the Athapascan and Eskimo tribes of the Yukon River. On no other part of the North Pacific Coast is pottery known. It is also unknown to the present inhabitants of Northeastern Siberia. Archaeological investigations made on the northern coast of the Sea of Okhotsk show, however, the existence of pottery among the prehistoric people of that district. Since this is the only place on the whole Pacific Coast, from the Amur River in Siberia northward to Bering Strait, and along the American coast south to California, where pottery is found, it seems to me to speak for an early connection between the inhabitants of these districts.

The problem of the earliest inhabitants of Alaska can certainly be solved by the archaeological investigations. The implements of the Eskimo and their physical type are so characteristic that they cannot be mistaken for anything else. If the most ancient shell-mounds of the east coast of Bering Sea, of which there are a great number, should reveal a type different from the Eskimo and a culture different from that of the Eskimo, we should have a distinct proof of a population preceding the present inhabitants of Alaska. All the evidences we find seem to make it probable that such a change of culture and of type may be found here, and I consider the investigation of this area as one of the important problems of American archaeology.

We may expect that if archaeology in America is applied hand in hand with ethnological and linguistic methods, it will be a most powerful help in unravelling the history of our continent.

FRANZ BOAS.

American School
of Classical Studies
at Athens

A SERIES OF COLOSSAL STATUES AT CORINTH

[PLATES I-VI]

ONE of the conspicuous results of the excavations at Corinth in 1900 was the discovery of a series of colossal statues of Parian marble just inside the Agora, a little southwest of the west buttress of the Propylaea. The series consists of at least four members, only one of which is so well preserved that it can be accurately measured. The upper part is given in PLATE I. It is in three large pieces, and practically nothing is lacking.¹ The only important parts which are lost are the nose, which was a separate piece set in, either originally or after an accidental break; the right forearm, and a part of the left calf. The right foot, from the instep to the tips of the toes, was found a year later about 20 m. to the northwest. This statue will ultimately be set up and appear as a whole; but since this has not yet been done, it must make its impression piecemeal or by the aid of a drawing. It has a height of 2.57 m.

That it was an architectural statue was at once evident. At its back is a pilaster which extends from the plinth to about the height of the top of the forehead. The figure is, as it were, a high relief hewn out of the pilaster. In the upper end of the pilaster is a dowel hole. Near by was found an irregularly quadrangular Corinthian capital (Fig. 3) with an iron dowel firmly fixed in it. When the dowel of the capital is inserted in the hole on the top of the pilaster, the head of the statue comes

¹ A view of the other two parts is shown in Figs. 1 and 2. All three fragments are here reproduced on nearly the same scale.

up snug against the capital, both the head and some of the acanthus leaves of the capital being cut away to effect the fitting. The abacus of this capital has a peculiar shape, as given in the annexed cut (Fig. 4); the dotted line indicates the place of the head of the statue, and the side *a* is fitted to be the support of a curved architrave block. While we have the complete block for the corner at the left of the curve (Fig. 5), of



FIGURE 1.—FRAGMENT OF COLOSSAL MALE FIGURE.

the block which would fit this abacus only a small portion is preserved (Fig. 6). Among the cornice pieces discovered was early found one with a straight face on one side and a curved face around its left corner which corresponds to the curve in the architrave block. This gave the certainty that our figure stood at a point where an entablature which it supported, after extending to this point from the right, made an inward curve. At this corner the figure stood as a pseudo-Caryatid, not

actually bearing the entablature, as do the maidens of the Erechtheum, but propping up the capital on which the entablature rested. To give the semblance of effort, the figure, though in other respects entirely in repose, with the right



FIGURE 2. — FRAGMENT OF COLOSSAL MALE FIGURE.

elbow resting upon the left hand, has the head bent forward under its burden.

This figure has its head turned slightly to the left (our left). A second figure practically a duplicate of this, preserved only down to a little way below the hips, but with its face perfectly

intact, has its head turned slightly to the right (PLATES II, II A¹). We were clearly warranted in placing this figure at the



FIGURE 3. — CORINTHIAN CAPITAL.

left of the other at the corner where the entablature reëmerging from its curve proceeds to the left in a straight line. Not only

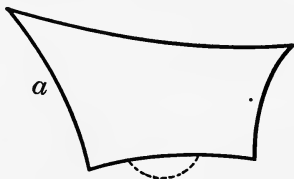


FIGURE 4. — ABACUS OF A CORINTHIAN CAPITAL

do the two figures incline their heads toward each other, but their elbows on these approaching sides are supported on their

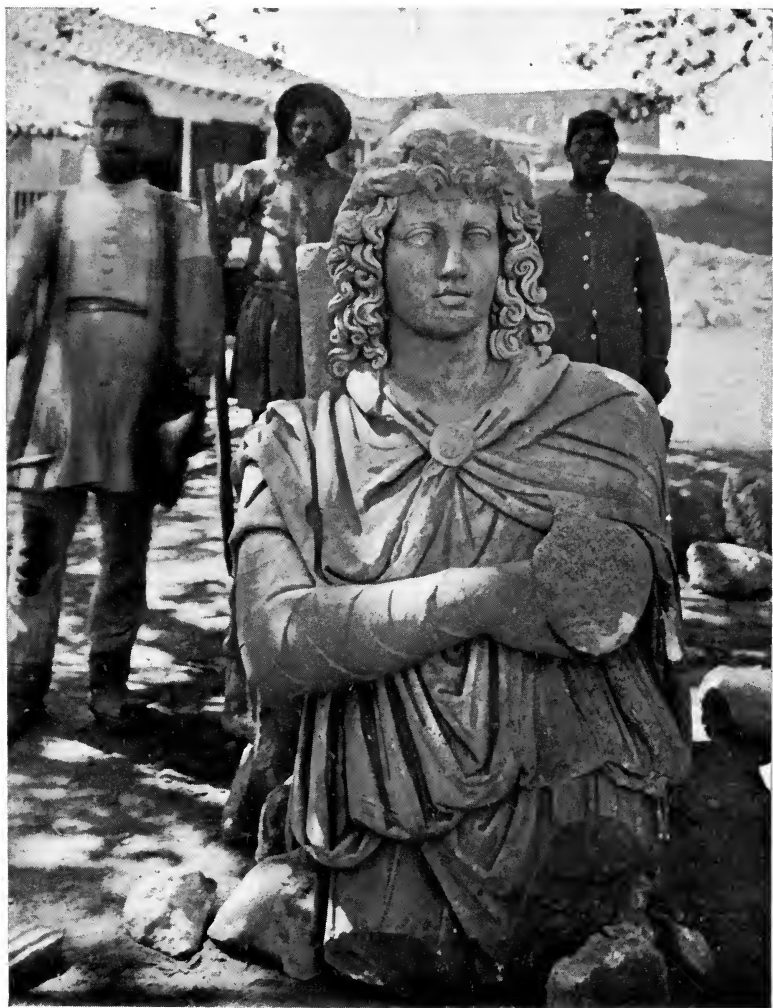
¹ PLATE II A is repeated from Plate III in the Supplement to Vol. IV (1900) of this JOURNAL.



COLOSSAL MALE FIGURE FROM CORINTH



SECOND COLOSSAL MALE FIGURE FROM CORINTH: HEAD



SECOND COLOSSAL MALE FIGURE FROM CORINTH



COLOSSAL FEMALE HEADS FROM CORINTH





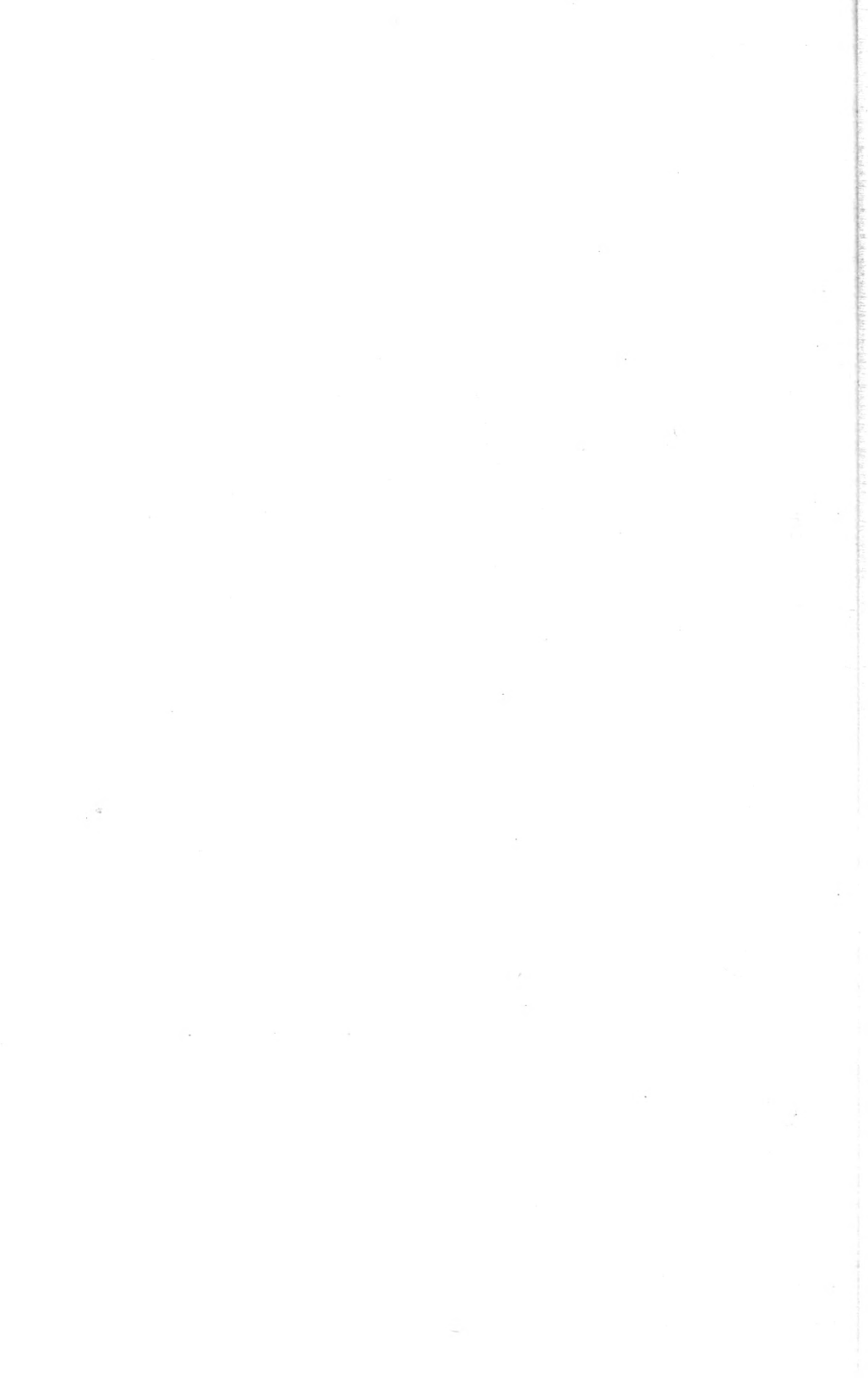
SERIES OF COLOSSAL STATUES FROM CORINTH

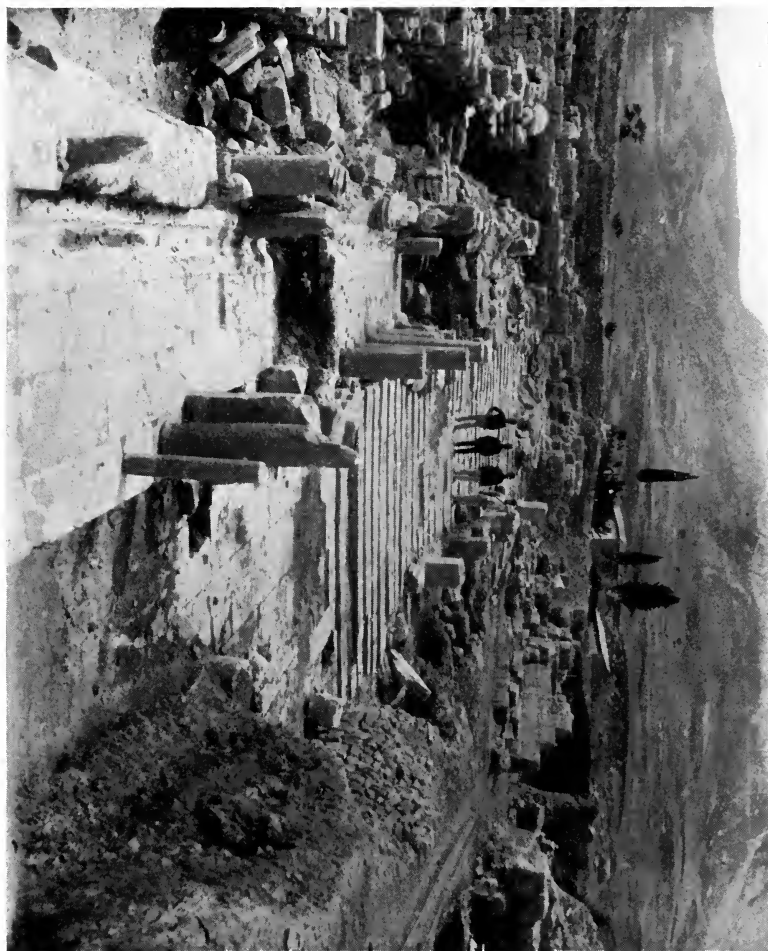
(From the drawing by Hjalvor Bagge)



PLAQUE OF COFFERED CEILING: HELIOS AND SELENE







SERIES OF COLOSSAL FIGURES FROM CORINTH

(Proposed foundation for the Porch in the right background, under a column of earth)



other hands. That there is an appropriateness in this arrangement is felt if we conceive of the positions as being reversed and the heads averted. In the actual arrangement we seem to have a companionship in labor.

Two bases were found at the same time and place (Figures 7, 8), with ornamentation similar to that of the architrave and cornice blocks; and as the plinth of the statue, the feet of which are preserved, fits into the socket at the top of one of them, we



FIGURE 5. — CORNER ARCHITRAVE BLOCK.

clearly have the material for restoring a whole system from the stylobate up to the cornice. The height of the system may be computed as follows: base, 0.87 m.; figure, 2.57 m.; height of the capital above the base, 0.30 m.; architrave, 0.64 m.; cornice, 0.30 m.—making a total height of 4.68 m.

Two other heads (PLATE III), also of colossal proportions, were subsequently found close by the others, and were recognized as belonging to the same system, from the fact that their backs were cut away in the same way as the others. It now becomes clear that the building with which we were dealing

had a considerable extent. A square Corinthian capital with the acanthus leaves hewn away as on the one mentioned before, made it probable that the figures to which these heads belonged stood to the right and left of the others at points where the entablature ran¹ straight.

A restoration of a portion of the system is here given in PLATE IV from the drawing by a Danish draughtsman, Hjalvor Bagge, and while the final treatment of the architectural part is still difficult, yet along with the treatment of the statues at least a provisional treatment of it must be essayed.

Assuming now that we have practically all of the material, the total length of the cornice pieces found is about 15 m. which would, then, be the minimum length of the building. The architrave blocks fail to afford clear evidence as to the extent. Enough pieces were found mixed up with the cornice blocks and statues to make a considerably greater length than 15 m. But they vary so much in their size and ornamentation

¹ It is possible that in two battered torsos we have parts of the bodies to which these heads belong, although one of the torsos was found at a considerable distance to the east.

While we have pieces both of architrave and cornice to fit both ends of the curve, one unexpected result comes out of a study of our material, *viz.* one of the two curved architrave blocks which has, like the other, the elaborate ornamentation in six bands, a twisted roll, a bead ornament, a leaf-and-tongue ornament, a broad band of anthemion, then another bead ornament, and at the very top an egg-and-dart moulding, is succeeded on the left by a straight piece with none of this ornamentation but with plain mouldings (Fig. 5), while the other one is succeeded on the right by a straight piece with all the ornamental bands (Fig. 6). If there was but a single curve in the entablature, this difference would make a striking asymmetry. We may, therefore, have to admit the possibility of a second curve, which would reduce this asymmetry. This would of course imply the loss of a good deal of the material with which we are dealing. While this is possible, it is perhaps safer to reckon only with what we have, and to suppose that there was only one curve, accepting the asymmetry.

What we have called a curve is not a complete curve; the blocks that begin it from either side run back into a wall, as is shown by their formless butt ends. Figure 5 gives the parts around the corner to the left, viewed from below. The companion curved block, which comes in from the right, could never have made a joint with the one to the left, as both butts are equally rough hewn. A piece of indeterminate size was certainly set in to mediate between the two inner ends of these curved blocks. Some ornament, as a medallion, may have served*for this purpose. The radius of the curve is 1.65 m.

that there remains considerable doubt as to how many of them can be placed in the same line. The two curved blocks with the anthemion ornament have a height of 0.64 m. and so of course the straight piece which joins one of them on the left.¹ The two whole straight blocks, each 3 m. long, and several pieces, all having the same ornament as the curved blocks, have a height of 0.72 m., and so can hardly have been in the same



FIGURE 6. — BLOCK FOR ABACUS.

line with the others. Two other blocks, also 3 m. long, have a height of 0.64 m. and lack the peculiar ornamentation. They lack also the band of myrtle leaves on the under side which all the others have.²

¹ The curve and the anthemion ornament begin on the end of the plain straight block, which is made into a little curve for the curved blocks to take up and continue.

² These two plainer blocks bear letters, mason's marks, upon them as none of the others do. One has I on one end and K on the other. The second has T

My first impression was that the system under discussion must find its place on the Propylaea, for the following reasons: (1) The massive foundations of the Propylaea were the only ones in the vicinity which seemed capable of bearing such a weight. (2) The statues and the architecture were all found



FIGURE 7. — BASE FOR COLOSSAL FIGURE.

within 12 m. of the west end of the Propylaea, a little to the southwest, in a bunch which could be circumscribed by a radius

and V. Since the letters can hardly have had any other purpose than to mark the joints, the same letter would probably be applied on each side of the joint, and there would be as many blocks as letters. This would make at least nineteen blocks, and supposing them to be of equal length, about 60 m. of that one kind of blocks. This great extent is enough to make one separate them from the rest. In the work of 1901 there were found stylobates of two long porches, one east of the temple hill, and bordering the road to Lechaëum, and the other west of the same hill, bordering the Agora on its north side. It is to this latter that these pieces might with considerable probability be assigned, on account of its proximity to the spot where they were found. Foundations to go with the other pieces must be sought elsewhere.

of 5 m. Furthermore, a few scattered pieces were found close up against the Propylaea on the side toward the Agora. (3) The colossal figures, two of which represent barbarian captives, as well as the reliefs on the bases, appeared to be appropriate ornaments of what Pausanias calls the "Propylaea,"



FIGURE 8. — BASE FOR COLOSSAL FIGURE.

but which was, as we know from coins of the imperial times from Domitian to Commodus,¹ nothing more nor less than a Roman triumphal arch. But between the hope of ultimately placing the figures on the Propylaea and the difficulty of doing so satisfactorily, the publication of them has been already too long delayed.

I have at last, however, fully abandoned the hope of bringing the system into connection with the Propylaea because by no possibility can we connect it with that building without doing

¹ Imhoof-Blumer and P. Gardner, *Numismatic Commentary on Pausanias*, pl. F, nos. 97-100.

violence to its structure as shown by the coins and by our excavations. All the architrave blocks which we can assign to the system have mouldings on both sides, which implies that they stood out free, a position irreconcilable with a triumphal arch.¹ Furthermore, any horizontal architecture could not be allowed to cross and interrupt the arch or arches of the Propylaea; and our statues could not lift their entablature to a height above these arches unless their bases were set upon a very high pedestal, whereas these bases with their broad projecting band at the bottom are clearly not meant to be so placed. Lastly, our architrave blocks are not long enough to span the distances which they would have to span in order to reach from buttress to buttress of the Propylaea.²

But in order not to leave the system absolutely without foundations, hovering in mid air, I venture to give it a substructure on which it may be adjusted. The line of the Propylaea buttresses is prolonged to the west by what we at first called a wall. It appears in PLATE VI, in the right background under the pillar of earth. But this is no mere wall. It is 4.10 m. wide, and should be called a platform rather. It is made up of large and small stones bonded by mortar, a mixture often called *opus incertum*. Its top was very level, and probably once had stone blocks upon it, to form a stylobate. In fact, at the end next to the Propylaea it has a layer of good quadrangular blocks of poros. Of the solidity of this core of *opus incertum* we had ample proof when, turning the flank of the Propylaea, we forced our way through it, in order to get our track into the Agora. At its western end it ran over the top of the ancient Greek fountain, and in order to clear the latter of the incumbrance we had to operate upon the mass with dyna-

¹ It is true that there are projections in front of the two great buttresses of the Propylaea; but these probably supported columns, which one plainly sees on the coin of Hadrian.

² It may be added that we have a plaque of a coffered ceiling, representing in two of its coffers Helios and Selene (PLATE V), which may with some probability be assigned to our system, but which could by no possibility find a place on an arch.

mite, and had still more convincing proof of its solidity. Its supporting power being conceded, its length of at least 25 m.¹ gives room and a pleasing freedom to deploy upon it the figures and their entablature.

The strongest reason for supposing that it carried them is that they were all, with a few insignificant exceptions, found close by it. If 12 feet seem too shallow for any building, it may be said in the first place that this was simply an ornamental border of the Agora. It is almost a matter of course that the figures faced toward the Agora; and this assumption is corroborated by the circumstance that they were all found where they would naturally lie if they had simply fallen forward from the southern edge of the platform. The side toward the north was perhaps closed by a wall which would break the north wind, and so make the porch, as far as its capacity went, a pleasant resort in the winter.

The concavity in the façade of the porch is such a striking feature that one naturally looks for parallels. One finds these, to compare small things with great, in buildings like the Septizonium at Rome² and in the Nymphaea of Side and Aspendus,³ which are simply façades with no more depth than the proscenium of a theatre. These buildings are called by Lanckoronsky⁴ "Scheinpaläste." Our building probably never had, like them, a second story, although it is possible that it had. All three of the buildings just referred to are supposed to have been fountain façades. In the case of the Septizonium the Capitoline plan of the city shows quite plainly the periphery of a water basin,⁵ and it is universally so restored. If it should be deemed necessary to bring our façade into line with these buildings as a fountain façade, it would not be diffi-

¹ At its western end, when it became broken up in ancient times, it probably once continued beyond where we now trace it, and joined at a very obtuse angle the stylobate of the porch before mentioned, which is also badly broken at its eastern end.

² Baumeister, *Denkmäler des Klass. Alt.*, Abbild. 1707, 1708.

³ Lanckoronsky, *Städte Pamphyliens und Pisidiens*, I, Taf. xix, xxx, xxxi.

⁴ *Op. cit.* I, p. 144.

⁵ *Loc. cit.*

cult to do so. The foundations run right across those of the ancient Greek fountain façade before referred to (p. 16). Water was once delivered in considerable quantity in this region. In Roman times it may have been brought to a higher level than in Greek times. But not to press too far the curve as a proof of similar use, it is perhaps safer to treat our building as a simple ornament of the Agora. It had a height of about 15 feet above its stylobate, and may have been sufficiently imposing. The fact it was a sort of extension of the Propylaea might make the features adapted to a triumphal arch, *viz.* the captive barbarians, especially appropriate.



FIGURE 9. — ARCHITRAVE BLOCK.

It has been repeatedly assumed in the description that the building in question belonged to the Roman city. Both the ornamentation of the blocks and the style of the statues exclude all doubt on that point. The carving on the most elaborately ornamented architrave blocks (Fig. 9) suggests the work on the Erechtheum; but one must not observe too closely, or the illusion will pass away. The carving looks elaborate only at a distance. The cornice blocks show a striving after effect in that a great variety in the forms of the rosettes is introduced (Fig. 10).

But it is the sculptural element that gives the most convincing proof, if any were needed, that the building is not only Roman, but at least as late as the second century of our era. The

two colossal figures are not without expression. The one with the perfectly preserved face has, in spite of a certain coldness, some dignity. Its companion would perhaps be just as effective if it had not lost its nose. But the two heads to which we have not yet attached bodies with any certainty are as expressionless as some heads that are to-day affixed to façades in Athens and New York.

As to the style of the reliefs on the two bases, one can hardly use the word "style" without a smile. The representation is



FIGURE 10. — CORNICE BLOCK.

absolutely uncouth. Its shabbiness cannot be adequately explained by calling it the work of a "prentice hand." Such work could hardly have been tolerated in an age when taste for the beautiful was still alive.

It is time, however, to turn away from the temptation to vituperate, and to discuss what is represented by the figures and the reliefs. To begin with the figures :

That barbarian captives are here represented is obvious. The type is one which appears on Roman triumphal arches,¹

¹ *E.g.* Arch of Septimius Severus, Baumeister, *Denkmäler*, Abbild., 1985 ; Arch of Constantine, *ibid.*, no. 1968, where the figures of captive Dacians are taken from the earlier Arch of Trajan.

and is abundantly represented in museums.¹ That most of the museum figures came from triumphal arches is probable; and in certain cases, as in the Lateran Museum, no. 710,² it is certain that they were supporting some part of the architecture, inasmuch as the back of the head is cut away as in ours.

Our second figure, however, is so youthful in appearance, like so many representations of Mithras,³ that on its discovery we declared, half in jest, that we must be approaching a Mithras temple.

The sex of the figures, in spite of the rather feminine appearance of the faces, can hardly be doubtful. The lack of the development of the breast, and the dress, particularly the pointed cap and the trousers, are certain tokens, and need not be enlarged upon. So familiar do the figures seem that we might almost imagine some young barbarian captives to have slipped from their places on one of the well-known triumphal arches.

The hand raised to support the chin and propped upon the other arm, from its frequent recurrence, appears to indicate dejection and also that the arms were bound.

The two heads without bodies are clearly female. They probably also represent captives, although they lack all expression of pain like that which throbs in the features of the well-known "Thusnelda" in Florence.

It might be possible from minute study of details to ascertain to just what nation these captives belong. The pointed cap, at any rate, known under the name of the Phrygian cap, points to an Asiatic nation.

The subject of the reliefs (Figures 7, 8) is plain enough. In the centre of one of them is a trophy consisting of a suit of

¹ Clarac, *Musée de Sculpture*, nos. 2163, 2164, 2162, 2161 A, 2161 B, 2161 C, 2161 G, 2161 F. Nos. 2162 and 2161 A show an arrangement of the arms similar to that of our figures.

² Helbig, *Führer durch die Sammlungen Klass. Altertümer in Rom*, p. 476. Mitchell, *Hist. of Ancient Sculpture* (Fig. 285).

³ Clarac, *Musée de Sculpture*, nos. 1191 A, 1194, 1191, 1190. Most similar to our figure, except in position, is no. 2085 (Paris).

armor set up on a tree trunk. A Victory rushes and flies toward it from the right, in order to deposit upon it a wreath. The cramped position of her legs and the monstrous wings make it probable that we have lost one monstrosity more by the breaking off of the head. To the left is a captive Asiatic with pointed cap, and arms bound. Thus we have brought close together the glory of the victor and the woe of the vanquished.¹

This relief in a measure helps to interpret the other. In the centre may be recognized an enormous helmet standing stiffly on its cheek pieces, crushing down two diminutive crossed shields, a trophy of a different shape from the other. My first thought was that the man on the right was the victor thanking God in a sort of boastful humility for his victory ; the face had a suggestion of Christian art. But it is almost certain that he is also a captive with his hands bound. With this agree his exceedingly meek looks.

He may be an Asiatic, like the others, with his cap doffed. He is bearded probably because he is represented as the father of a family. The suggestion has been made that he is a German ; but we must leave his nationality doubtful, although it would be highly satisfactory to find in a provincial city a memento of the wars of Marcus Aurelius with the Marcomanni. The group on the left is very interesting. A diminutive figure, probably a boy, with the same pointed cap and trousers as the large statues on the bases, leans his head on his hand, supporting his elbow on a woman's knee. It is an attitude of dejection. The woman, alone of all the figures, has a touch of dignity which has suggested to one good critic of sculpture that she might on this account be intended to represent a divinity, Rhea Cybele for example. But this would be departing from the sphere in which both reliefs seem to fall. I take her to be either a simple captive woman or perhaps the representative of a captured country. It has been noted that con-

¹ The left corner is in a very crumbling condition, and the figure of the captive was split off. It was necessary to hold it in position while the photograph was taken.

quered nations were often represented by the Romans as women with one or more children at their knees.¹ Were it not for the pointed cap, one might be tempted to see here also Germany.

RUFUS B. RICHARDSON.

ATHENS,
June 24, 1901.

¹ Bienkowski, *De Simulacris Barbararum Gentium apud Romanos*, p. 10:
"In Gestalt einer einsamen, höchstens von einem oder zwei Kindern begleiteten Frau, welche unter einem Tropaeon oder inmitten von Waffen sitzt."

GENERAL MEETING OF THE ARCHAEOLOGICAL
INSTITUTE OF AMERICA

DECEMBER 26-28, 1901

THE Archaeological Institute of America held its third annual meeting for the reading and discussion of papers at Columbia University, in New York, December 26, 27, 28, 1901. The meetings were presided over by the President of the Institute, Professor John Williams White, except Thursday evening, when Professor James R. Wheeler presided, and Friday morning, when Professor Thomas D. Seymour occupied the chair. Friday afternoon the Institute met in joint session with the Society of Biblical Literature and Exegesis. At the meeting of Friday evening, December 27, the Acting President (now President) of Columbia University, Professor Nicholas Murray Butler, delivered an address of welcome, after which Professor Thomas D. Seymour delivered the Annual Address before the Institute, on *The First Twenty Years of the American School of Classical Studies at Athens*. After this session, President and Mrs. Butler held a reception.

A resolution was passed thanking the authorities of Columbia University for their hospitality and expressing thanks to President and Mrs. Butler for the reception of Friday evening.

There were five sessions at which papers, many of which were illustrated by means of the stereopticon, were presented. Brief abstracts of the papers, prepared by the authors, follow.

THURSDAY, DECEMBER 26. 2.30 P.M.

Address of welcome by Dr. Julius Sachs, President of the New York Society of the Institute.

1. Professor Joseph Clark Hoppin, of Bryn Mawr College, *A Cylix in the Style of Duris*. (Read by Dr. George H. Chase.)

This cylix was acquired by me in Athens in 1896 and was said to have been found near Naples. Form, that commonly used by the masters of the Euphronian cycle. Height 6 inches, diameter 14 inches. On the interior a Silenus and a nymph. On the exterior a thiasus; Dionysus and Sileni and Maenads on one side, and on the other Sileni and Maenads, five figures in each group. Inscription on the interior.

The resemblance of this cylix to other vases with the signature of Duris is too marked for any doubts to exist as to whether the vase should be attributed to him. The exterior is almost a duplicate of the cylix signed by Duris in Boston (TARBELL, *Am. J. Arch.* 1900, pp. 183 ff.). Other features characteristic of Duris are the drapery with its fine lines, the profiles, maeander and cross pattern around the central picture, exergue and employment of five figures in each group. The style of the figures on the interior is slightly better than those of the exterior. The representation of a thiasus is rather rare in the work of Duris, and the use of the feminine form of inscription is not found on any of the vases signed by him. On the whole the vase is in point of execution as good as any other vase attributed to him, if not better.

2. Professor Frank Cole Babbitt, of Trinity College, *An Ancient Herm from Trachones*. (Presented in abstract by Professor John H. Wright.)

In the spring of 1896, at Athens, Professor George D. Lord, of Dartmouth College, called my attention to an ancient Herm, which is at Trachones, a village near Athens, in the house of Mr. George Petousi, Deputy of Thebes. The Herm, in its present state, is a rude quadrangular slab of the native *poros* stone, about 30 inches high. Projections on either side with unfinished surface indicate that it was probably set in a wall. The back also is unfinished. The head has been broken off, but on the front there still remain the *membrum virile* and traces of the working of the hair. On the front is also an inscription in the old Attic alphabet, in letters of about 560-550 B.C., as follows:

Ἑρμῆν Εὐφρονίδης τόνδε
Καλ(λ)ίως ἐπόησεν

Doubtless the inscription was meant to form an hexameter line. The poetic order suggests this, and examples like, τόδ᾽ Κύλων and ἀνέθηκεν Κάλλωνος¹ make τόνδ᾽ Καλίας (*sic*) far from impossible.

3. Dr. T. W. Heermance, of Yale University, *The Reciprocal Influence of the Doric and Ionic Styles in Greek Architecture*.

The influence of the Ionic on the Doric style is chiefly shown: (1) by the sporadic and experimental use of Ionic mouldings in place of Doric from the latter part of the sixth century; (2) by the enrichment of Doric architectural members by means of Ionic mouldings, either alone, or in conjunction with Doric mouldings (the Lesbian *kymation* under the horizontal geison alone becomes a permanency); (3) by the assimilation to the Ionic of the Doric raking geison in form and the horizontal geison in position.

Corresponding influences of Doric on Ionic are insignificant, but a triglyph frieze or a complete Doric entablature is used with Ionic (or Corinthian) columns in Hellenistic work in the second century. The mixture is first made at Pergamon.

Remarks were made by Professor Allan Marquand.

4. Professor Allan Marquand of Princeton University, *Robbia Pavements*.

The history of the pavements made by various members of the Della Robbia school is usually limited to the brief statements made by Vasari. Our knowledge of this subject may be amplified by a study of the designs used by this school especially for ceilings and for the backgrounds and subsidiary decoration of large sculptured monuments. Several of these pavements still exist, a fine example by Andrea della Robbia now decorating a chapel in the Collegiata at Empoli. Others of similar pattern are found at S. Fiora, at Monteverchi, and at S. Gimignano.

The pavement made by Luca della Robbia the younger for the Loggia of the Vatican no longer exists *in situ*. But a few tiles, preserved in a case in the Sala Borgia, and a drawing made in 1745 by a Spanish painter Francesco La Vega, enable us to reconstruct its general character. One of the rooms of the Vatican still contains in good condition a Robbia pavement bearing the insignia of Leo X,

¹ F. D. Allen, *On Greek Versification in Inscriptions* (*Papers of the American School at Athens*, Vol. IV), pp. 74 and 79.

and other tiles of similar character are preserved at the Pantheon and especially in the chapel of Fra Mariano in the Church of S. Silvestro al Quirinale.

5. Dr. Edgar S. Shumway, of the University of Pennsylvania, *Notes: (1) On the DVENOS Inscription; (2) On the so-called Senatus consultum de Bacchanalibus; (3) On the Sanction in Legal Inscriptions.*

[No abstract of this paper has been received.]

6. Professor Arthur Fairbanks, of Iowa State University, *On the So-called Mourning Athena Relief.*

An examination of the relief makes it probable that the artist is reproducing some statue of about the middle of the fifth century B.C. The pillar is to be interpreted as the *meta* of a palaestra, in which case the relief represents Athena looking down with favor upon men offering her worship at the palaestra. On an early white lecythus in the Museum at Athens is seen an Athena in the same attitude and much the same dress; it is not improbable that both vase-painter and relief sculptor drew their inspiration from the same source.

7. Mr. James Tucker, Jr., lately of Providence, *Some Statues from Corinth.* (The author of this paper, a promising and beloved member of the School at Athens in 1899-1900, was drowned in the Nile, March 24, 1900. This paper was read by Professor John H. Wright.)

The marble statuary found in the course of the American excavations at Corinth is almost wholly of Roman date. Among the exceptions are two vigorously rendered lion's-head spouts, which were found in the fountain-house of Glauce; they are earlier in date than those of the Tholos of Epidaurus and not far removed from those of the Parthenon, plainly belonging to the period of the Hellenic constructions of Pirene. Of Roman date may be mentioned a portrait statue of the type of the Polyhymnia of the British Museum; two colossal female statues, not unlike the Artemisia from the Mausoleum and the Canephorae of the Villa Albani, respectively; a beautiful torso of a small nude Aphrodite, of the Capitoline type; a seated god (probably Dionysus), with a panther at his side, not unlike the figure on the choragic monument of Thrasyllus in Athens; and a male portrait head of a familiar type. Each of these objects

was fully described in the paper, and numerous analogues for all in Graeco-Roman art, as also in some cases in earlier art, were pointed out.

8. Mr. Eugene P. Andrews, of Cornell University, *The So-called Restoration of the Parthenon now in Progress.*

[Mr. Andrews showed stereopticon views and commented on the work of "restoration."]

THURSDAY, DECEMBER 26. 8 P.M.

1. Professor William K. Prentice, of Princeton University, *The Sanctuary of Zeus Madbachos on the Djebel Shêkh Berekât in Syria.*

The Djebel Shêkh Berekât is a mountain peak about halfway between Antioch and Aleppo. On its summit is the sanctuary of two gods known as Zeus Madbachos and Selamanes. In November, 1899, three members of an American archaeological expedition visited this sanctuary. An account of the results of their investigations, together with the text and a discussion of ten inscriptions found there, is expected to appear shortly. These inscriptions were originally on the face of the temenos wall, and show that the temenos was constructed at the end of the first and the beginning of the second century after Christ, by various persons, at their own expense, in fulfilment of vows. It also appears that the Roman system of measures was employed, but that the local units, a cubit of 412.5 mm. and a foot of 275 mm. were retained, and finally that the cost of the masonry was $5\frac{1}{4}$ drachmae per square cubit of surface, or about 22 cents per English cubic foot.

One of the two gods worshipped at this sanctuary, Selamanes, has been identified by C. Clermont-Ganneau and Georg Hoffmann with the Assyrian god Shalmânu. The name of the other, Madbachos, is derived from the Syriac word *Madhbaḥ*: "altar." This explanation of the name, which was suggested by M. Clermont-Ganneau, is proved by an inscription found by this expedition at Burdj Bâkirbâ, on the gateway of the temenos of "Zeus Bomos." Both here and on the Djebel Shêkh Berekât there was an ancient altar, traces of which still exist. Each shrine was a "high place" of ancient Semitic worship, where in Roman times a temple and a temenos were built. And yet in neither case was any name given to the local divinity other than "*Zeus Bomos*" or *Zeus "Madbachos,"* the

"Altar-god" of that locality. Strangely enough, however, on the Djebel Shêkh Berekât the foreign god Selamanes was associated with the purely local deity.

2. Dr. Charles Peabody, of Phillips Academy, Andover, *Explorations in Mississippi*.

Under the auspices of the Peabody Museum of Harvard University, explorations in Mississippi were undertaken in May, 1901.

The first mound opened is on the plantation of Mr. Ellerton Dorr, Jr., in Clarksdale, Coahoma County. In ground plan it is oval; the dimensions are: height, 9 ft. 6½ inches; length from north to south 90 feet; breadth from east to west 60 feet. It was cut away down to the surface of the surrounding field in sections five feet in thickness, the earth of one section being thrown into the space left by that preceding. The entire mound was thus cut through and put back; the work was begun on May 11 and completed May 18. Both recent and older burials were discovered; traces of eleven of the former and of sixty of the latter were counted; the older bones were in poor preservation. In addition, pottery, shells, and lead ore were taken out. Of note are a vase with circular rim and triangular base and a second vase with convex circular base and concave, in-sloping sides; this one is broken and incomplete.

Another mound situated on the plantation of Mr. P. M. Edwards, at Oliver, Coahoma County, was opened and excavations made through nearly one-half of its material. The dimensions are: length, from north to south, 195 feet; breadth, east to west, 180 feet; height, 25 feet; the ground plan is oval. There were no recent burials, but sixteen older skeletons were discovered in fairly good preservation. Most of these were buried in the so-called "bundle" form, the bones being carefully laid, the long ones side by side and the skull often toward the north or the east. Pottery, bone, and stone implements, beads of glass and shell, a brass bell, ashes, charcoal, bark, and numerous shells were found. The pottery is usually decorated with incised lines, but many fragments are stamped or worked into ridges with thumb and finger. In the vicinity of this mound hundreds of arrow and other points were picked up in fragments or complete; these are of flint-like stone and in nearly all cases chipped with very great skill and delicacy. Scrapers of a similar type were abundant.

Both mounds had originally been surrounded by other smaller mounds, the presence of which is now proven by slight uneven-

nesses of surface and by the numerous pottery fragments to be seen at these places. While part of these mounds are almost necessarily post-Columbian, some time may have elapsed between the beginning and completion of the works. It is impossible to set an absolute date.

Work was suspended on June 28, 1901.

3. Professor E. D. Perry, of Columbia University, *Some Illustrations of Dörpfeld's Ithaca-Leucas Theory*.

As the title indicates, this paper was chiefly a commentary and explanation of some lantern-slides from photographs taken at Leucas and the neighboring island of Arkoudi. Dörpfeld's arguments, as already given by Professor Smyth in *The Nation* (August 16, 1900), were briefly summarized, and one or two considerations added which seem to favor Dörpfeld's theory; e.g. in *Odyssey* XIV, Odysseus, inventing a tale to account to Eumaeus for his arrival at Ithaca, says the king of the Thesprotians sent him away on a ship bound for Dulichium; but as soon as the ship was well away from shore the crew seized and bound him, in order to sell him into slavery. At evening—evidently of the same day—they reached Ithaca, which is here spoken of as if it had been the first port accessible. Now a day's sailing, with a northwest or west wind, would just about bring a vessel from a Thesprotian port to Leucas. This is not in itself much of an argument, but may be of some weight in connection with others.

The island of Arkoudi answers extremely well to the Homeric Asteris, if Leucas be assumed as Ithaca, as was shown by the views exhibited. On the whole, however, Dörpfeld's theory is still far from proven, and is probably not susceptible of satisfactory proof.

4. Professor R. B. Richardson, Director of the American School at Athens, *An Ancient Fountain in the Agora of Corinth*. (This paper was read by Professor Wright.)

In the spring of 1901 was completed the excavation of the Ancient Fountain in the Agora, which lies about 25 m. west of the western end of the Propylaea. It ranks with Pirene and the temple of Apollo as one of the most interesting monuments of the ancient city. It consists of two parts, the fountain chamber proper, and a painted Doric frieze of triglyphs and metopes that encloses it. The latter consists of a long east front and a short southerly front, which meet at an obtuse angle; on this frieze the original stucco and painted decoration, which conform strictly to the laws of Doric

polychromy (Fenger, Taf. vii), are still preserved. Back of this triglyphon, and on a level with its upper surface, was anciently constructed a platform on which stand statue-bases of Roman date, and evidences of statue-bases of an earlier date, which are in part in line with the triglyphon. The triglyphon itself is pierced on the east front by a passageway, from which descends inward a flight of seven steps to the original level of the fountain-chamber, about 7 feet below the level of the top step; on the front of the low wall opposite are openings of water-pipes into two bronze lion's-head spouts, still *in situ*, while along the base of this wall are gutters. At some time—before the erection of the transverse triglyphon—this fountain-chamber was more open to approach on its original, lower level (this appears from certain constructions beneath and in front of the triglyphon), and appears to have been quadrangular in shape. This ancient fountain-chamber, with its lion's-head spouts, dates apparently from about 500 B.C. Subsequently, but probably not later than in the last third of the fourth century B.C., the triglyphon was erected; some filling-in was done behind it to the level of its top, and the flight of stairs constructed, the fountain being evidently still in use. At about the same time a street pavement, ascending from the east, was laid along part of the southern line of the triglyphon. These dates are attested, not only by general architectural considerations, but especially by the presence of certain statue-bases that are bedded on the triglyphon, or in line with it, two of which are inscribed with the name of Lysippus. At a very much later time, doubtless early in the Roman period, further filling-in took place; a platform was constructed—flush with the top of the triglyphon—over the whole fountain-chamber, including the steps, and new statue-bases were set up, which disregarded in part the lines of the triglyphon. Again, in Byzantine times, when the process of the accumulation of earth upon this platform had long gone on, a new platform was constructed, of poor marble slabs, which is about 4 feet above that of the Roman period.—This excavation affords an interesting example of archaeological geology: a Byzantine level, a Roman level, a Greek construction not later than the fourth century B.C., and a more ancient Greek level. It is a wonderful chance that has preserved this early fifth-century fountain intact to our times.

5. Mr. Eugene P. Andrews, of Cornell University, *Newly Discovered Facts in Regard to the Different Series of Ornament Attached to the Architrave of the Parthenon.*

With the aid of photographs, Mr. Andrews described briefly the traces left on the architrave of the Parthenon, by decoration which has been affixed to it at various times.

The traces are holes cut into the marble and shallow ruts in arcs of circles. The holes are either rectangular or round. Traces of some sort occur on the architraves of all four sides and on the blocks on the ground from the north and from the south architrave. On the east architrave the mortices are under the metopes; twelve of them are approximately square, and most of them contain lead holding iron dowels. The two end ones are oblong and are empty. Holes like the last two occur over each column of the north side; that is, under every second triglyph. These are all empty except the one over the northwest column. This contains a heavy bronze dowel wedged in. The smaller connection between the dowel and its shield has been broken off about flush with the face of the architrave.

A hole more or less nearly square and rudely cut is over each column of the west end and of the south side, except that the holes over the corner columns are like those on the north architrave.

On the north architrave and on the south architrave, under each triglyph, are three round holes 0.002 m. in diameter, drilled into the stone, placed as if forming the points of triangles of various shapes. A circle, serving to intersect the three points, has a radius in each case of about 0.415 m. On the Nike bastion are three larger empty round holes with the same arrangement and radius. In most cases the small round holes on the architrave contain iron nails broken off flush with the surface.

Over each of the two middle columns of the east end is an oblong hole containing lead and iron. If shields belonged to these, they covered each a group of letter holes of the Nero inscription. In each case, also, a hole on each side of the group has been enlarged, and holds the lead and the iron or bronze peg which held the edge of the shield fast. In the case of several of the other mortice holes, small holes on the circumference of a circle, with an average radius of 0.515 m., seem to point to a like use of clamps on the edges of the shields.

The south group of letters of the Nero inscription covered half the space about the south shield hole.

The following conclusions were drawn:

(1) There were several different series of decoration on the architrave.

(2) Twelve shields, not uniform in size, were on the east architrave about the middle of the first century after Christ.

(3) Probably the two end shields of the east architrave belonged to the same series with the shields of the north architrave and of the other corners. Their diameter was a little over a metre.

(4) The workmanship of the holes and the bronze dowel in one of them speak for their relative age.

(5) On the north and on the south architrave was a decoration, at a different time, about 0.83 m. in diameter.

(6) The shields of the west end and of the south side seem to have been a separate series.

(7) Two shields, with a diameter of 0.84 m., were placed on the east architrave after the Nero inscription had been removed.

6. Mr. Edward L. Tilton, of New York, *Concerning the Two Temples of Hera at Argos.*

The remains of the two temples of Hera at Argos, or more properly, at the Argive Heraeum, exhibit certain features which are unique, besides throwing additional light upon various known phases of Greek architectural art. The older temple antedated, apparently, all others in Greece whose ruins are known to us. The second temple, to judge from the remains, must have exemplified all that was best in Greek art, in refinement of design, beauty of execution, in proportions, materials, polychromy, and sculpture.

The old temple was built upon a platform or terrace supported by a Cyclopean wall constructed of large boulders. A portion of this platform was paved with irregular limestone blocks which served in part as a foundation for the temple. The remains of a stylobate and a few odd stones seem to justify the conclusion that the temple was a hexastyle, with fourteen columns on the side, and with a cellar 36.30 m. in length by 8.50 m. in width, or width to length as 1 is to $4\frac{1}{4}$, which is the proportion we might expect to find in a temple of great antiquity.

The second, or Fifth Century temple, was built by Eupolemus upon a lower terrace, which was carefully constructed by cutting and filling. The remains indicate that the temple was hexastyle, with twelve columns on the sides. The stylobate was constructed of limestone; the walls, columns, and the entablature, except as noted, were of poros stone; the metopes, cyma, and roof tiles were of marble.

FRIDAY, DECEMBER 27. 9.30 A.M.

1. Dr. Ernst Riess, of the De Witt Clinton High School, New York City. *Some Names found on Coan Inscriptions.*

It is well known that Greek families liked to choose their names with reference to the divinities especially worshipped by their members. Names, therefore, form an important source for the history of religion, especially for the discovery of old and obliterated divine beings. An investigation into the proper names of the island of Cos shows an astonishing lack of names composed with the name of that god to whom the island owes its chief fame, Asclepius. It also shows that in spite of the Dorian origin of the inhabitants, the Dorian gods proper, Apollo, Heracles, Demeter, and even Zeus, are but sparsely represented. On the other hand, names composed with elements meaning "best," "light," "life," "saving," form an abnormally large percentage. The conclusion is drawn from this, that these names contain the proof of an ancient worship of a god, or a circle of gods, whose sphere of influence was ever this, namely, protection, salvation, healing, and that in later times Asclepius was substituted for this aboriginal divinity. The existence of divine beings of the name of Aristos or Ariste, and their relation to the same sphere, has been known from other parts of Greece. And the continuation of an old "Carian" cult on the island, even after the Dorian invasion, is furthermore supported by the analogous continuation of the worship of Hecate Stratia, belonging to a similar sphere of influence.

2. Professor Charles C. Torrey, of Yale University. (1) *A recently discovered Phoenician Temple Ruin*, (2) *A Hoard of Ancient Phoenician Silver Coins*.

(1) In the autumn of 1900, the remains of a Phoenician temple were discovered in a hillside just south of the Awwaly river, about a mile and a half north of the present city of Sidon. The ruin was that of a large quadrangular building, enclosed by a massive wall built of limestone blocks, which were nearly cubical in shape, from three to four feet thick, and very nicely squared and fitted. An inscription in the Phoenician language, found on several of the stones which composed the wall, gave the name of the builder as Bad-Ashtart, King of Sidon, and grandson of King Eshmunazar; and stated that the temple was dedicated to the god Eshmun.

The site was partially excavated, in the early summer of 1901, by Macridy Bey, of the Imperial Ottoman Museum in Constantinople. The work was done in a thoroughly scientific manner, and yielded many interesting results, of which we may expect a full report in due time.

(2) Early in the year 1901, a hoard of ancient silver coins was unearthed near Sidon. At the time when the collection was seen by

the writer, in the spring of that year, it consisted of perhaps fifty coins. These were all Phoenician octadrachms, mostly of the well-known type designated "Class III," in Head's *Historia Numorum*, p. 671. Two specimens belonging to the older type of the time of Artaxerxes II (Class II, *ibid.*) were of especial interest, as they seem to have been hitherto unknown. On the one, just above the towers of the city (obverse), appear the letters *bêth, mêm*. On the other, the letters *ain, bêth* appear just above the reins of the chariot (reverse). Both of these coins, as well as the majority of their fellows, were in an excellent state of preservation. The writer secured the two just described, and a few others. It is to be hoped that all of the coins which formed this hoard may be kept in sight until a complete description of it can be made.

3. Dr. Alice Walton, of Wellesley College. "*Calynthus*" or *Calamis*; a note on Paus. X, 13, 10.

Whether we adopt in Paus. X, 13, 10, τέχνη . . . ἱππέων, the smooth reading ἐσθήκασιν ἔργα, or believe that some form of συνεργός is contained in this vexed passage, an unusual distinction is made in the work of the artists who made the second offering of Tarentines at Delphi, the text implying that the work as a whole, that is, its composition and central group, is the work of Onatas the Aeginetan, while the accessory figures of horsemen and foot-soldiers and possibly the fallen warrior were done by "Calynthus." As Pausanias was especially accurate in Book X in identifying an artist introduced for the first time unless he was well known, "Calynthus" was a man of some note whose name was confused by a scribe with the name Phalanthus occurring three times just below. Brunn has suggested that this artist was Calamis, a view which seems plausible when we consider a similar division of work in the Syracusan offering at Olympia, and that Calamis was noted for his renderings of horses.

If we assume that the king of the Peucetians was represented in the central group, the natural reconstruction is that of conventional warrior-groups of the period, in which the Tarentines correspond to Greeks, and the Peucetians to barbarians. Opis lies prostrate in the centre; Taras, the eponymous hero of Tarentum, and the king of the Peucetians are above him to right and left, while Phalanthus-Poseidon, characterized by the dolphin, stands in the centre, with his face turned toward Taras to signify that his is the victorious side. Horsemen and foot-soldiers flank this central group, turned obliquely toward it.

4. Professor George A. Barton, of Bryn Mawr College,
(1) A Babylonian Deed of Gift from the Sixth pre-Christian Millennium.

The tablet which forms the subject of this note is in the E. A. Hoffman collection of the General Theological Seminary in New York City. It was purchased by Dean Hoffman in 1898. The Bursar of the Seminary informs me that it was purchased in Paris. The tablet is formed of a hard black stone, and is $3\frac{3}{4}$ inches square. It is convex in shape, being probably an inch thick at the centre, and sloping toward the edges. The edges are $\frac{3}{8}$ of an inch thick in the middle, but much thinner at the corners. The figures on it are cut about $\frac{1}{8}$ of an inch deep; the other signs are distinctly cut, but by no means as deeply. At the bottom of col. II a circle was cut by mistake and erased. This has made the tablet considerably thinner at that point.

My attention was first called to the tablet about a year ago. While making a study of the archaic inscriptions which had been published, I noticed the statement concerning this tablet in Radau's *Early Babylonian History*.¹ It was evident that Radau had not read the tablet. Later, one of my pupils, Miss Ellen Seton Ogden, through the courtesy of the authorities of the Seminary, secured a copy, and we made considerable progress in its interpretation. In September of the present year I was permitted to collate the tablet again. This enabled me to obtain a clearer impression of some of its most peculiar signs, and to establish the fact of the erasure above mentioned. Otherwise I found it necessary to make no changes in Miss Ogden's copy.

Further study of the tablet has made it evident that it is almost identical with a tablet in Paris which is as yet unpublished, but which Thureau Dangin mentions in the preface to the *Supplément* of his *Recherches sur l'origine de l'écriture cunéiforme*, designating it as γ , and many of the signs of which he cites in the table which follows. When those signs and their position on tablet γ are examined, they correspond, with one exception, to the signs of our tablet, column for column and line for line. When this *Supplément* was published in 1899, Thureau Dangin had not identified all these signs.

In interpreting the tablet I have worked from the starting-point furnished by the numbers. It is evident that the first of these gives the area of a field, and probable that those which follow give the dimensions of its various sides. This supposition has proved cor-

¹ Radau's *Early Babylonian History*, pp. 12 note, and 321.

rect. The tablet so far yielded up its meaning that I have given a tentative transliteration and translation of it in my *Sketch of Semitic Origins*,¹ which is now in press. The tablet itself is of such interest to Babylonian palaeography as well as to history that I venture to present my version of it to the Institute, and to call attention to some of its most important palaeographical contributions to our knowledge. Unfortunately the sign which designates the locality from which it comes, I am unable to identify. The writing shows the document to be older than the Blau monuments, but later than the archaic inscriptions published last year by Father Scheil in his *Textes élamites-sémitiques* and the *Recueil de travaux*.²

I hope, in connection with Miss Ogden, to publish the text, with complete commentary, at an early date. It reads as follows:

- I (1). IIIMV GANA DUK-KA DINGIR ?-LAG
- (2). SAL-LAL-TUR
- II (1). IIIMVICL URI-NI-A SIG LIK-A
- (2). IIIMVICL GÁL PI NER-A DA-KU GUR DIMMENA
BABBAR NIN-A TAB BAR(UMUN)
- III (1). IIIMVIC E BABBAR LUĞ AB TAB BAR
- (2). IIIMVICL IGI KUR IR DU BAD LIK-A GAR-A
- (3). GIR SAG

i.e. "3005 Bur of a field of clay, to the god ? presented Sallaltur. 36050 cubits on its Akkadward side, the lower (side), from the beginning; 36050 cubits running along the breadth of the ziggurat of Shamash, the lady who pours forth brightness; 36050 cubits (along) the temple of Shamash, the messenger of Ab, who pours forth brightness (*i.e.* Sin); 36050 cubits before the mountain unto the abode of Ishtar (?), to the beginning, for making brick. May he give strength, may he bless."

(2) *The Haverford Library Collection of Cuneiform Tablets.*

Through the generosity of Mr. T. Wister Brown, of Philadelphia, a collection of four hundred cuneiform tablets was purchased for Haverford College early in October of the present year. By the desire of the donor, the collection is to be known as the "Haverford library Babylonian collection." The tablets were purchased of Mr. Gullabi Gulbenkian, of New York. They are inscribed in the cunei-

¹ Page 213, n. 5.

² One of them was repeated in the *J. Am. Or. S.*, XXII, pp. 126 ff.

form character of about 2400 B.C., and are of various sizes. Some of them are large and flat, containing from two to five columns of writing on each side, while others are much smaller. A very interesting series of temple receipts, most of them about $1\frac{1}{2}$ by 2 inches in size, contains a number of case tablets.

I have catalogued about eighty of these tablets and find them to be lists of sheep, goats, asses, and various kinds of supplies, as well as receipts for grain and other kinds of food, similar to the tablets published in Parts VII, IX, and X of the *Cuneiform Texts* recently issued by the British Museum, and also similar to those published by Reisner last year in the *Mittheilungen* of the Berlin Museum, under the title *Tempelurkunden aus Telloh*. Judging from those already catalogued, the Haverford tablets are also from the archives of the temple of Telloh. One of the temple receipts reads:

"1 kid of royal quality from the mountain; 1 kid of royal quality for Tammuz the shepherd Mirburrtum brought; he gave it to the temple. (Dated) Month of the festival of Tammuz, the year after Urbillum was destroyed."

It bears the seal of "Ur-Nina, shepherd of the sheep offered to Ningirsu." The name Ningirsu identifies the locality with Telloh. Urbillum was destroyed in the forty-eighth year of Dungi, and again in the third year of Bur-Sin II. This document must, therefore, come from one of these reigns. All the dated tablets so far catalogued come from one or the other of these reigns, *i.e.* approximately 2400 B.C.

5. Miss Lucia C. C. Grieve, of New York, *The Dead who are not Dead*.

The laws of ancient Athens declared that those for whom the burial service had once been performed, *i.e.* travellers or soldiers reported dead, or persons suffering from suspended animation, were impure and not to be admitted to intercourse with their fellow-men. To evade this law, such persons, as a means to their restoration, were required to allow themselves to be treated as infants. A similar custom obtained in Rome, but the person to be restored must climb into his house through the roof. In India an elaborate and costly ritual was necessary, the restored man still acting the part of a new-born child. These coincidences do not argue the existence of this practice in the original Indo-European stock, but are the outcome of the inherent feeling for organized government, and probably date from an early period. Such a practice, either in the law or in its evasion, was impossible among the ancient Egyptians, and not in

accord with what we know of the Semitic races. Traces of it are found in various parts of India at the present day.

Remarks were made by Professor A. V. W. Jackson.

6. Professor Samuel Ives Curtiss, of Chicago Theological Seminary, *Ancient Sacrifice among Modern Semites*.

This paper is based on researches and discoveries in Syria, Palestine, and the Sinaitic Peninsula during the years 1898-1901, made through personal interviews with Arabs and Syrians, interpreted by Rev. J. Stewart Crawford, of Nebk, and others.

(1) The use of blood in connection with sacrifice was first observed among the Arabs of Ruheibeh in the Negeb, of *semn* (Arab butter) and *henna*, on shrines in the land of Edom, and inside the traditional tomb of Aaron on Mt. Hor, near Petra, also on the doorposts and lintels of shrines in the Druse mountains, and on the cupola of Nebi Iyub at Busan, and on three short pillars in front of it (Heb. *mazzeboth*).

(2) The unanimity of the testimony in all parts of northern Syria and among all classes of people, that "*the bursting forth of blood*" is the essential element in sacrifice, is remarkable.

(3) In what does sacrifice consist? I have undertaken my researches in the full persuasion that the "sacrificial meal" was the primitive form of sacrifice among the Semites. My earliest investigations seemed to confirm this view—no part of the animal is burned, it is boiled and eaten as a feast. After very extended inquiry in all parts of the country, I found that the feast was simply an incident, that it is non-essential to the idea of sacrifice, but that the "*bursting forth of blood*" is essential; that is, the death of the victim, this, and this only, is sacrifice. The saint (*weli*) is sometimes considered as the giver of the feast, for the animal was given to him and is his, but he is not conceived of as being present as host.

(4) The sacrifice is a redemption (*fedou*); e.g. "every house must have its death,—man, woman, child, or animal." The life of an animal is accepted for the life of a man, "Spirit for Spirit," "it becomes a *kaffarah* (Heb. *kipporeth*, covering) for his sins."

7. Professor A. V. Williams Jackson, of Columbia University, *Some Archaeological Memoranda made in India*.

Professor Jackson described first a visit to Sanjan, with a view to identifying the probable site of the oldest Parsi "Tower of Silence"

in Hindustan; and then gave an account of a shrine or temple near Rawel Pindi in Northern India, where a sacred fire is perpetually kept burning. Although the guardians of the fire are Moham-medans, grounds were given to show that we have here apparently a survival of an influence of the Persian fire-cult, which may be shown elsewhere in Northern Hindustan.

The second half of the paper was devoted to throwing light on certain passages in Sanskrit dramas by illustrations of archaeological remains at Benares and Sanchi.

8. Dr. William Hayes Ward, of New York, *Symbols of Babylonian Gods.*

Besides the multitude of representations of Babylonian and Assyrian gods, there appear in the art of the peoples numerous figures that are evident symbols of gods. Some are easy to recognize. The crescent is the moon-god Sin; the thunderbolt is the storm-god Ramman. On cone seals of the Assyrian and later periods columnar representations appear; whether altars or gods is not always clear. These columns were called *asherim* by the Hebrews, but it has not been noticed by students of Hebrew archaeology that they were not alike, and must be differentiated. The Roman Hermae were similar figures. In his study of the Monolith of Salmanasar, Von Luschan has gathered the representations of symbols of gods accompanying figures of Assyrian kings, and compares them with the lists of gods mentioned in the several inscriptions, but without very satisfactory identifications. But the bas-relief of Bavian (Sanherib) gives twelve emblems, and twelve gods are mentioned, and both in the same order, which identifies these twelve, and shows that the column with a ram's head is Ea, the double column Nebo, the column with the two lions' heads is Nergal, and the column with the lance-head is Marduk.

We now turn to the boundary stones, or grants of lands, and gain much more light from one found by De Morgan in Susa, on which the names of the gods accompany the emblems, though not all are well preserved. These confirm the conclusions from the bas-relief of Bavian and add other identifications, such as the fire-god Nusku, represented by a lamp. We learn that Ea was represented not only by the ram, but by the capricorn with a fish's tail. Some emblems yet remain to be identified.

9. Miss May Louise Nichols, of Farmington, Conn., *The Origin of the Red-figured Technique in Attic Vases.*

The question as to the origin of the red-figured technique in Attic vase-painting belongs to the domain of theory rather than of scientific proof. For, as has been truly said, the red-figured technique never had any development in the true sense of the term, but all at once flashed upon the mind of the vase-painter as a fully developed idea. But although it may never be possible to know the exact facts as to the origin of this technique, it is possible to note some tendencies of the times, and to trace some steps in the history of vase-painting and sculpture which may have led to the conception of this idea. This is all that the present paper attempts to do.

The strong tendency toward naturalism visible in Greek art of the sixth century, and the fact that that century was an age of experiment, of inventions, and of steady progress toward the most effective use of color in both painting and sculpture, are emphasized.

Examples are cited to show the tendency in terra-cotta, sculpture, and vase-painting, toward the use of a light color for the figures and some dark color for the background. It is found in vases of the 'polychrome' technique, whose origin is assigned to the so-called 'Dorian technique' of the old Argive pottery; in the grave stelae such as that of Lyseas; in the sarcophagi such as those of Clazomenae; and in some of the Gorgoneion cylixes which, as a class, furnish an excellent illustration of the tendency of the age toward experiment. Theories which assign to any one of these *exclusively* the origin of this red-figured technique are deemed inadequate, as they *all* express the same tendency; while with all these works about him to suggest the idea consciously or unconsciously, nothing seems more natural than that some ingenious vase-painter should have conceived the idea of the simple red-figured technique.

10. Dr. George H. Chase, of Harvard University, *Some Terra-cotta Types from the Heraeum.*

Besides the typically Argive style of terra-cottas, *i.e.* flat-bodied female figures with a tendency to elaborate plastic ornamentation, there were found in the excavation of the Heraeum a considerable number of figures of the ordinary archaic type. These are, for the most part, draped female figures both with and without attributes in their hands, similar to a large class of terra-cottas found all over the Greek world. At the Heraeum, however, it is noteworthy that these figures are relatively far less important than at any other Greek site where similar terra-cottas have been found. Furthermore, a number of our archaic specimens show clear traces of Oriental influence, while the attributes which many of the figures carry are in no case

attributes of Hera. It seems probable, therefore, that these archaic terra-cottas were not originally a native Argive product, but were copied from foreign types. Three single specimens, a group of two lions, a flying female figure (perhaps a gorgon), and a group representing a bull and a lion, are noteworthy because of their similarity to well-known sculptures.

FRIDAY, DECEMBER 27. 2.30 P.M.

Joint session with the Society of Biblical Literature and Exegesis.

After the address by Professor Edward Q. Hincks, of Andover Theological Seminary, on *Some Tendencies and Results of Recent New Testament Study*, the following papers on archaeological subjects were read :

1. Professor Franz Boas, of Columbia University, *Some Problems of American Archaeology*.

Owing to the absence of literary information in regard to the early history of America, methods of American archaeology are similar to those of European prehistoric archaeology. Archaeological investigations in America can be made fruitful by the application of ethnological experience, since probably the customs of the ancient inhabitants of America were similar to those of the present Indians. Some of the most interesting problems in American archaeology are met with on the Pacific coast of the continent, where, at the present time, a great diversity of languages are spoken, where distinct types occur, and where the culture is also highly differentiated. Ethnological evidence indicates that at an early time intercourse took place between the eastern plains of America and the Pacific coast. This fact is also borne out by archaeological evidence particularly in the region of the State of Washington and southern British Columbia. It would seem that there has been early intercourse between the Indians of the North Pacific coast and the inhabitants of Siberia, while the Eskimo who at present inhabit Alaska appear to be recent intruders. The solution of these problems requires a thorough archaeological investigation of the east coast of Bering Sea and of the Pacific coast between Columbia River and Vancouver Island.

[This paper appears in full above, pp. 1-6.]

2. Dr. William Hayes Ward, of New York, *The Hittite Lituus*.

One of the peculiar points often recurring in the so-called "Hittite" art is the rod, curved up at the bottom, held in the hand of a king, or priest, and generally designated a "lituus." It differs from the lituus held by Roman augurs, in that it is held at the top, and the curve is at the bottom, thus reversing the Roman style. This "lituus" occurs on the rock sculptures of Boghaz-Keui and on numerous seals.

A "Hittite" seal-cylinder which has lately come into my possession makes clear what this "lituus" is. On this seal are figured the two principal Hittite deities, the goddess corresponding to Ishtar, or Venus, holding open her garment to show her exposed body, and the warrior god Teshub, who holds in one hand a club over his head, and in the other two objects, one a rope attached to a ring in the nose of a crouching bull before him, and the other the "lituus."

This "lituus" is drawn with unusual care. It is clearly a serpent held by the neck. The mouth is open, and the eye is clearly seen. The curved lower end is simply the tail of the serpent bent upward.

We already knew that the Hittites paid reverence to the serpent, as I have previously published a cylinder, with Hittite inscription, showing the worship of a *Nehushtan*, or brazen serpent on a pole. The serpent, or more usually two serpents arranged as a caduceus, was carried by Babylonian gods; and Gilgamesh is even seen, on an Assyrian sculpture, strangling a serpent, as did Hercules, and as does the Hittite god on this seal.

3. Professor Theodore F. Wright, of Cambridge, Mass., *Figurines from Tell Sandahannah.*

This mound, lying about twenty miles southwest of Jerusalem, has been excavated by the Palestine Exploration Fund and has been found to contain lamps, jars, vases, bowls, plates, weights, figurines, inscribed stones, and many coins.

I. There are sixteen figurines cut out of thin lead. Human figures are rudely but clearly represented, and all are in attitudes of agony and are bound hand and foot with wires of lead, iron, and bronze. They were at first regarded as images of captives, but are now seen to represent persons who were to be attacked by means of sorcery. This view is supported by references to the immediate explanations of Professor Wunsch, of Breslau, and M. Clermont-Ganneau, and to the treatises on Magic in Hastings' *Bible Dictionary*, and by Budge, Jastrow, and others. Accompanying the figurines were tablets having some Hebrew but mostly Greek inscriptions, not yet fully deciphered, but containing curses.

II. One figurine in terra cotta represents a draped female figure with peculiar head-dress. This may represent Astarte, but is more likely a figure of Saint Anna, mother of Mary, whose name is the common explanation of the term Tell Sandahannah, Saint Anne. Cimabue gave the Madonna a similar head.

Professor Theodore F. Wright then read the *Report of the Board of Managers of the American School in Palestine*.

At the meeting of the Society of Biblical Literature and Exegesis held December 28, 1900, the Committee appointed to establish the American School of Oriental Research in Palestine presented its final report and was discharged. The management of the School then passed into the hands of the contributing institutions and individuals named in said report, and by them a Board of Managers was chosen for the ensuing year. To this Board of five members, Professor John Williams White, being President of the Archaeological Institute of America, was added *ex officio*. The Board was organized by choosing a Chairman and a Secretary. Professor J. H. Ropes was requested to act as Treasurer and has done so.

The previous Committee had appointed Professor C. C. Torrey as the first Director. His report, which is made a part of this report, will show the faithfulness of his work under unexpected difficulties. Professor H. G. Mitchell is now in Jerusalem as the second Director and reports favorably as to the continued assistance of U. S. Consul Merrill, the development of the library, and the work being done by him and his one regular student. This is Mr. Martin A. Meyer, a graduate of the Hebrew Union College, Cincinnati, whose examination for the fellowship offered by the Archaeological Institute showed that he was the best qualified of the three candidates. Professor Mitchell will give special instruction for limited periods to some others.

There are now twenty-one contributing institutions, namely, Andover Theological Seminary, Auburn Theological Seminary, Boston University, Brown University, Bryn Mawr College, Colgate University, Columbia University, Cornell University, the Episcopal Theological School in Cambridge, the General Theological Seminary of New York, Harvard University, Hebrew Union College of Cincinnati, Johns Hopkins University, McCormick Theological Seminary, the University of New York, the University of Pennsylvania, Princeton University, Princeton Theological Seminary, Trinity College of Hartford, the Union Theological Seminary of New York, and Yale University.

The subscription being made through the labors of Dr. James B. Nies for an endowment excavation fund now amounts to about \$30,000.

The decease of Professor Joseph Henry Thayer on the twenty-sixth day of November has removed from the Board of Managers its head and most active member. The School originated with him and had his constant attention and generous service until his strength failed. May it become the worthy monument of this sincere friend of man, ripe scholar, and beloved teacher.

Respectfully submitted by the Board of Managers:

GEORGE F. MOORE,	JOHN WILLIAMS WHITE,
JOHN P. PETERS,	THEODORE F. WRIGHT.
WM. HAYES WARD,	

DECEMBER 10, 1901.

Dr. Nies then read a report on the Endowment Fund for Exploration and Excavation under the Direction of the School in Palestine.

4. Professor Louis B. Paton, *The Civilization of Canaan in the Fifteenth Century B.C.*

[No abstract of this paper has been furnished.]

5. Professor John H. Wright, of Harvard University, *Some Aspects of the Work of Heinrich Brunn.*

[No abstract of this paper has been furnished.]

6. Professor William H. Goodyear, of the Museum of the Brooklyn Institute of Arts and Sciences, *New Observations on Architectural Refinements in Italian Churches.*

[This paper will appear in full in an early number of this JOURNAL.]

SATURDAY, DECEMBER 28. 9.30 A.M.

1. Dr. Enno Littmann, of Princeton University, *Four Early Palmyraean Inscriptions.* (Read by Professor W. K. Prentice.)

The American Archaeological Expedition to Syria in 1899-1900 found in Palmyra among others four ancient inscriptions with very interesting archaeological details. Two are honorary inscriptions on the brackets of two columns in the so-called Temple of the Sun.

They are of great importance, because they show that a temple on this site was begun at least as early as the first century after Christ. One was executed in honor of a prominent citizen by his sons in the year 28-29 A.D., the other by the community of Palmyra in 70-71 A.D., in honor of a man who contributed to the building of the temple. The other two inscriptions are on altars found outside of the city. One is dated 34 A.D. This altar was erected by the members of a "*thiasus*," i.e. a religious society which had charge of a certain festival. This explanation was given to me by Professor Clermont-Ganneau, who has found the same festival in the Old Testament, in Phœnician inscriptions, and in the famous Mâdeba map. The fourth inscription states that a Nabataean, who had been commander of cavalry in a garrison on the Euphrates, erected two altars in honor of his own national god, a god whose name was unknown until recently, but was discovered at the same time in Palmyraean, Nabataean, and Safaïtic inscriptions.

2. Dr. Carroll N. Brown, of Asheville, N. C., *Fragment of a Treasure List found in the Acropolis Wall of Athens.*

The inscription is one of several discovered by Mr. Brown while a fellow of the School of Classical Studies at Athens (1896-1898). It is a fragment of a treasure list dating from a period shortly before the middle of the fourth century B.C., and similar to many inscriptions already published in *C.I.A.* II, 2. It has been possible to restore it very fully by comparison with these lists, and in its turn it casts new light on portions of them that were obscure or lacking. Thus in *C.I.A.* II, 2, 677, II, l. 38 and 680 l. 11, ἐπτά should be τρεῖς or τρεῖς. In *C.I.A.* II, 2, 677, II, ll. 38 sqq.; 680, ll. 5-14; 681, ll. 23-33; 711, ll. 6-13, weights of two vessels may be restored, and *C.I.A.* II, 2, 681, ll. 24-33, and 711, ll. 6-7, may be corrected in other points. *C.I.A.* II, 2, 678, A. I, l. 21, may be restored with absolute certainty. *C.I.A.* II, 2, 684, is found to form part of the new inscription and must be entirely rewritten to accord with it. Koehler's proposed readings here, though probable in themselves, are found to be untenable in several particulars. In *C.I.A.* II, 2, 714, l. 6, δλ[οσίδηρος] should be restored and *C.I.A.* 676, ll. 1-3, should be emended to agree with the new inscription. In *C.I.A.* II, 2, 676, l. 4; 701, II, l. 51; 713, l. 16, the lacunae should be filled by the words [ὁ Σμικίθη] ἀνέθηκεν. In *C.I.A.* II, 2, 652, B, l. 11, κατακεχρυσωμένοι should be σεσημασμένοι.

Δοκιμεία χρυσίου, testing specimens, and λείαι χρυσαῖ, show specimens of weights used in weaving, are for the first time described

fully enough to allow us to form some conception of their size and use, and in recording the weight of the former a new sign, E (= τεταρτημόριον), is used. ($1CE = 1\frac{3}{4}$ obols.)

3. Dr. Ernst Riess, of New York, *The Place of Classical Archaeology in the Secondary School*.

[No abstract of this paper has been furnished.]

Remarks were made by Dr. Sachs and Professor J. H. Wright.

4. Professor Karl P. Harrington, of the University of Maine, *A Canard, A Quarry, A Query*.

A canard, in my opinion, is the idea of O. E. Schmidt, that the remains of an ancient tomb, perhaps that of Cicero himself, adjoin the church of San Domenico, near Isola Liri. The large stones of the foundation may have served other purposes in Cicero's villa near by; and the supposed opening into the tomb is doubtless merely a drainage canal.

An archaeological quarry may be found in the church and abbey of San Trinità at Venosa, the birthplace of Horace. The walls, which are in a ruinous condition, are so full of fragments of inscriptions and other objects of interest that they could be easily worked to good profit, by the American School in Rome, for example.

The query is whether Schmidt is not essentially correct in locating Cicero's *Pompeianum* just outside the Herculanean gate. Cicero would inevitably have required beauty of natural scenery and convenience of access in selecting the villa. Convenience in this case must have meant proximity to the harbor. The elevation back of the two houses next to the Herculanean gate meets both conditions, harmonizing also with the supposed location on the "*via Graeca*," and with the local tradition as to the site. The important part of the villa would have been on the hill itself.

5. Professor Mortimer Lamson Earle, Barnard College, Columbia University, *Notes on the Greek Alphabet*.

I. *Of the Evolution of the Supplementary Aspirate (Spirant) and Assibilate Signs*. — The evolution of the characters Φ and X must be first discussed. In regard to the evolution of the former character the theories may be grouped under the two heads, morphological and phonological. The morphologists, who would derive Φ simply and arbitrarily from Φ (ϕ), are represented by Franz and Larfeld; the phonologists, who would derive the new aspirate (or spirant) character from the traditional aspirate ⊗, are represented by François Lenor-

mant and von Wilamowitz-Moellendorff. Probability seems to point to the development of the new character for *ph* under the impression of a desire to give alphabetic expression to *ph* and *ch* to match *th* (⊗) and fill out the scheme

B . Γ
Γ . K
Δ ⊗ T

Thus from the obsolescent or obsolete guttural sign that stood next to Γ. was derived the new character for *ph* (phei), partly on account of a certain similarity between the guttural character and the form of theta and partly on account of a phonological relation between the theta and the sound to be represented by the new character. The development of the character for *ch* (X or +) followed from this, the form of the new sign being due perhaps partly to kappa (K), partly to theta (⊗).—As for Ξ with the power of X (*chs*, *ks*), its use in this function was due to the phonetic value of zeta (Ξ) and the resemblance of the latter sign to the obsolete character Ξ (samega?). The old sign with its new power and a name similar to phei and chei (viz. xei) retained its traditional place in the alphabet. For *ps* (*phs*) a new sign with the name psei was placed at the end of the alphabet (after X), its form due perhaps in part to all the three of the preceding signs Υ Φ X.

II. *Of the Names of the Original Letters of the Greek Alphabet.*—A comparison between the traditional Greek names and the traditional Hebrew names. The Greek names represent, it would seem, Phoenician names in some cases different from the Hebrew. It is suggested that samekh would naturally have given samega. May this not have been misunderstood as sammega (i.e. sam mega) and the name simply rejected by the Ionians? The Ionic name sigma would then be a characteristic name for the sole remaining simple sibilant.

III. *Of the Beta Signs.*—Remarks on the beta signs that diverge from the common Greek type (B). Theraean beta (⌈) treated as a differentiation of ⌈ = ⌈ (pei). Two, or perhaps three, primitive Greek forms of beta suggested.

IV. *Of the Sixteen-letter Alphabet.*—The differing views of Professor Sophocles (1848) and W. Schmid (1893) about the origin of the grammarians' notion that the primitive Greek alphabet had but sixteen letters. Professor Sophocles's view seems the more plausible.

6. Professor Fitz Gerald Tisdall, of the College of the City of New York, *The Credibility of Xenophon's Anabasis.*

The credibility of a history depends on the fulness and accuracy of the author's information and his impartiality, which includes honesty and freedom from bias.

The character of Xenophon is depicted in *Anabasis* III, 1, 4 ff., as devoid of patriotism, unscrupulous, and careless of truth. Some parts of this passage are scarcely credible. As confirming this view of his character, the question of his age at the time of the *Anabasis* is considered. The opinion at present prevailing is that he was about thirty years old,—the age he assigns to Proxenus,—and this is based wholly upon statements, or rather inferences from statements, in the *Anabasis*. The correct view that he was forty-three or forty-four rests upon Strabo and Diogenes Laertius, two impartial witnesses of different periods, not seriously contradicted by Plutarch. The expression of Xenophon after his dream, *ποῖαν δ' ἡλικίαν ἐμαντῶ ἐλλεῖν ἀναμένω*, implies mature age; and the passage with Seuthes is only explicable on the same supposition. That Proxenus was his *ἀρχαῖος ξένος* is irreconcilable with the age of thirty; whereas if both were forty-three or forty-four, the difficulties disappear.

The story of Xenophon's rise in part of one night from being a civilian friend of Proxenus to the position of virtual commander of the Greek army is untrustworthy. So also that of Xenophon's deeds thereafter. The manoeuvre against the Colchians is instanced as a passage calculated to deceive by giving the reader the impression that Xenophon invented a new form of attack, whereas it must have been well known to the soldiers.

As errors of statement, the incredible number of one million two hundred thousand in the king's army stamps Xenophon as careless or ignorant. The error of over three hundred miles in distance in the *Anabasis* invalidates many of his distances and makes the whole uncertain. The battle of Cunaxa, containing the incredible rout of six thousand Persian cavalry by six hundred Persian cavalry under Cyrus, ending with the death of himself and all his attendant nobles, is not trustworthy.

The *Anabasis* is a good story containing much information, but not to be considered as veracious history.

After this paper, Professor F. W. Putnam, of Harvard University, read a *Report on the Establishment of the Travelling Fellowship in American Archaeology*.

7. Miss Harriet A. Boyd, of Smith College, *Mycenaean Discoveries at Gournia, in the Neighborhood of Kavousi, Crete*.

[Miss Boyd showed and explained a series of views, illustrating her recent excavations at Gournia. See p. 71.]

8. Miss Blanche E. Wheeler, of Providence, *The Pottery at Gournia*.

The excavations at Gournia, Crete, in 1901, yielded extensive remains of pottery. Though much of it was broken, a remarkably large number of vases was found whole. This pottery may be briefly classified as follows:

I. Monochrome pottery, made of: (a) coarse red clay, used for pithoi and other large vessels; (b) coarse yellow clay, used for amphorae; (c) fine red, pinkish, gray, and yellowish clay, used for cups, bowls, etc.

II. Pottery made of fine pinkish clay, with a red or black slip, usually very thin, often metallic in quality, used for cups and bowls.

III. Painted pottery, made of: (a) fine red, pinkish, and yellowish clay; (b) rather coarse pink or yellow clay.

The designs are bands, zigzag lines, wave lines, and dots; plant patterns, such as the vine, fern, large heart-shaped leaf, ivy, and crocus; spirals; representations of marine life, such as the cuttlefish, nautilus, and seaweed; the double axe; rosettes; and small flowers or petals between spirals.

The colors of the decoration are white, red, and black. Sometimes the last two colors appear in alternate bands, showing that they were thus used intentionally. On many vases the color shades from black to bright red, as a result of uneven firing. White bands and dots are often painted on the red or black decoration. One fragment has, in addition to these bands and dots, a white spiral resembling tendrils. The colors are both lustreless and lustrous. A slip of the same color as the clay is usually applied first and on it the design is painted, but in some cases the design seems to have been painted directly on the clay.

The variety of shapes is great, — cups, bowls, pitchers, ewers, amphorae, stirrup-jugs, "schnabelkannen," jars, fillers, and many shapes as yet unclassified.

With a few exceptions the pottery is wheelmade. The shapes are graceful, and the decorations are artistic, in many cases showing excellent technique. The pottery belongs to the so-called Island ware. It represents, generally, the late Mycenaean style, as is shown by the overcrowding of the space with ornamentation.

9. Mr. William Warner Bishop, of the Polytechnic Institute of Brooklyn, *Roman Church Mosaics of the First Nine Centuries*.

Mr. Bishop described briefly a number of these pictures, and classified them with regard to their subjects and the placing of these subjects in the various parts of the church. The main results of the study were, first, that the apse is almost entirely given over to symbolic scenes; second, the tribune and triumphal arches have, generally, symbolic representations drawn from the Apocalypse; third, distinctly non-Apocalyptic Biblical scenes are found only on the tribune arch of one church, SS. Nereo ed Achilleo, and in the panels of the nave of S. Maria Maggiore. This church, however, is the only one in which the nave mosaics have been preserved. It was shown that the mosaics in S. Paolo and SS. Cosma e Damiano directly influenced the four mosaics made in the ninth century by order of Paschal I. If a Roman tradition as to the placing of subjects existed, it was different from that which is shown in the literary sources of the fourth and fifth centuries.

The following papers were read by title :

1. Professor John C. Rolfe, of the University of Michigan, *The Language and Style of the Preamble of Diocletian's Edict De pretiis Venalium Rerum.*

This document has, in a way, the same relation to the time of Diocletian that the *Monumentum Ancyranum* has to that of Augustus; yet its Latinity has, so far as I know, never been carefully examined, and it is seldom cited in our lexicons and handbooks.

On account of the many and flagrant blunders made by the stonecutters the testimony of the Edict, especially in matters of orthography, has been lightly esteemed. This defect is, however, in part made good by the fact that we have several versions, and by a comparison of these the original text may be restored in many instances.

In the assimilation of prepositions the document shows surprising regularity, and a decided preference for the unassimilated forms. Thus we have *inmanitatem*, 1, 7 (*imm*-, A.); *inprobos* and *inmodestos*, 1, 9; *inprobos*, 1, 17; *inpedita*, 2, 11; *inmunis*, 2, 21 (*imm*- in S. (?); the reading is *iinmunis*). *Inmo*, 1, 9 (A. P.) and *senper*, 1, 21 (S. A.), 1, 23 (P. S.; *semper*, A.) and 2, 18, seem to be due to a false analogy with these forms. In no case is the unanimous testimony of the versions for the assimilated form, and in only one case (*collationem*, 2, 4, S. P.; *conl*-, A.) does the balance of evidence point that way.

An especially interesting orthography is *obtumsi*, 1, 18 (attested by P. S. G., while A. has *obtunisi*). The expression *quis adeo*

obtumsi pectoris . . . est is interesting for its parallelism with Virg. *Aen.* I, 567, on whose interpretation and orthography it throws light.

In spite of the grandiloquence and verbosity of the Preamble, its actual offences against classical Latinity are surprisingly few.

The following words and expressions are especially interesting from the lexicographical point of view; nearly all are inadequately treated in the lexicons: 1, 17, *intempestivo* (new word); 1, 2, *sudore largo*, for the usual *sudore multo*; 1, 2, *honestum publicum* (cf. *ex commodo publico*, 2, 23); 1, 3, *de praeterito* (new); 1, 9, *inmodestos* (new as a subst.); 1, 11, *temperamentum* (cf. 2, 22 and 1, 22); 1, 12, *quantum*, = *ut* (unique); 1, 15 *in peiora* (new in plural); 1, 22, *superis* (new in this sense); 1, 20, *exercitos habent* (said by Thielmann, *Archiv f. lat. Lex u. Gram.* II, 377, not to be found after Plautus); 2, 1, *quaduplo, octuplo* (new, if adverbs); 2, 10, *subditi* (new as a subst., at least in the singular).

[This paper will be published in full elsewhere.]

2. Professor George Hempl, of the University of Michigan, *The Runic Inscription on the Anglo-Saxon Sword found on the Isle of Wight.*

The runic inscription on the hilt of the Anglo-Saxon sword found in the Isle of Wight and now in the British Museum (*Stephen's Old Northern Runic Monuments*, III, p. 459) reads

wēcō wērī
'self-defence'

3. Dr. Edmund von Mach, of Harvard University and Wellesley College, *The Draped Female Figures from the Acropolis — An Attempt at Classification.*

A classification is possible from several points of view. Some of the classifications which may lead to definite results as to date, place of provenience, etc., are:

A. According to the treatment of the finger- and toe-nails. Not many nails are preserved. The upper fragment (Gardner, Fig. 12) shows an entirely different nail and fingertip from what is found on Athenian sculpture (cf. the stele of Aristion) while it strongly resembles the well-preserved nail of the second finger of the right hand of the "Hera" of Samos (not to be seen on photographs, because the fingers are bent up and hidden under the shadow of the drapery-fold). The nail is excellently preserved.

B. According to hair.

I. Number of braids. (1) Three braids. (2) Four braids. This is the later group. There is, however, at times an overlapping of group I.

II. Style of hair in braids. (1) Braids done in zigzag lines. (2) Braids represented by oblong strips cut by shallow horizontal lines or grooves. (3) When these lines are somewhat slanting and the strips themselves rounded instead of flat the effect is extremely natural (cf. Overbeck, Fig. 41 *b*, less satisfactorily Gardner, Fig. 28).

III. Style of hair over forehead and temples. (1) Hair running in even and parallel, fairly horizontal, layers over the forehead and continuing in the same direction over the temples (Tarbell, Fig. 94). (2) Hair over temples following a different direction from the hair over the forehead (Overbeck, Fig. 41 *a*). (3) Lowest row of hair differently done from upper rows. (4) At times in fantastic curls. (5) Direction of rows, vertical instead of horizontal (Overbeck, Fig. 41 *b*). (6) Fantastic curls not confined to the lowest row. Viewed from these several points of view the "Nike" of Delos, *e.g.*, falls in where she properly belongs; and the inaccuracy of the old date at the very beginning of the archaic period becomes clear.

IV. According to the direction of the folds of the drapery. (1) Folds straight on both sides. (2) Slanting on one side.

4. Professor Mary Gilmore Williams, of Mt. Holyoke College, *Studies in the Life of a Roman Empress*.

It is the purpose of these studies to compare the scanty evidence furnished by historians with the testimony of coins and inscriptions, so as to indicate the relation of Iulia Domna to her predecessors and to define her position in the Empire. With her the title of the Empress received its last important addition. She was named on coins, "Mater Augustorum duorum, Mater Senatus, Mater Patriae," when her sons became co-emperors. The amplified title, "Iulia Pia Felix Augusta Mater Augusti et Castrorum et Senatus et Patriae," was used after Geta's murder. She was the first Empress to be named on a milestone, and the first to be represented on coins with the legends *Liberal Aug.* and *Fortunae Reduci*. She was the only Empress who presided over the Secular Games, and who received an *acclamatio* from the Arval Brethren. Her name is associated with the Emperor's in giving the dates of several inscriptions. Coins and inscriptions presenting her name are more numerous than those in honor of any other Empress. Cohen records more than three hun-

dred and fifty coins. Most of the nearly two hundred inscriptions are of some public significance.

5. Professor James R. Wheeler, of Columbia University, *Heracles Alexicacus*.

[No abstract of this paper has been furnished.]

6. Professor James W. Kyle, of the William Jewell College, *The Maidens' Race on Attic Vases*.

A black-figured Attic lecythus, 22 cm. high, found in Salamis, now in the Central Museum at Athens, depicts three women running, evidently in a race. The figures, 6.50 cm. high, are unmistakably intended for women, since their faces, arms, and legs are white. Each has her hair done up in two large coils, on top of the head, and at the nape of the neck. Their loose flowing garments are girded up and wound about the waist, leaving the legs bare to half-way up the thighs. Arms and legs are extended in the violent striding fashion habitual in vase-paintings of racers. The exact similarity and regularity of their attitude and their preparations for running indicate a race. Furthermore the presence of a black object, in shape and size like an altar, with an irregular flame-shaped mass upon it, depicted just at the rear of the hindmost figure, seems to indicate some formal service in honor of a divinity. The simplest interpretation seems to be that this vase represents the eldest of the three sets of maidens who raced in the games held in honor of Hera at Elis, as described by Pausanias (Book V, 16). The dress of these figures does not harmonize exactly with Pausanias's account, but doubtless he merely described some victor's statue as he saw it. This vase seems to be the only one in existence depicting an athletic contest of women.

The comparative freedom of the painter in execution, and the delicately graceful shaping and fine finish of the vase, indicate a date near the end of the black-figured period.

7. Professor J. R. S. Sterrett, of Cornell University, *Descent reckoned μητρόθεν*.

[No abstract of this paper has been furnished.]

8. Professor W. N. Bates, of the University of Pennsylvania, *Etruscan Horseshoes from Corneto*.

In this paper the writer described and discussed four bronze horseshoes found near Corneto, and now in the Free Museum of Science

and Art of the University of Pennsylvania. They are half-shoes or sandals and all are excellently preserved. Each shoe has three holes for attaching, one circular hole near the centre, and two square holes at the ends of the shoe. The writer argued that these bronzes were really the soles of leather boots to which they were attached by means of a large rivet and straps. The boots were kept on by straps which crossed behind under the ankle, were then brought forward and crossed in front, and finally tied behind above the ankle, thus keeping the shoe firmly in place. The lower surface of each shoe has a number of projecting points, suggesting that they were to be used on ice. In general these shoes seem similar to the mule-shoes mentioned by Catullus. The tomb in which they were found probably dates from the fourth century B.C.

Of the following papers, which were withdrawn, no abstracts have been furnished: (1) Dr. James Dennison Rogers, of Columbia University, *On the πύργος of the Teian Inscriptions* (C. I. G. 3064, 3081) and the νομίσματα πύργια of Aeschylus, *Persians* 859. (2) Hon. Samuel J. Barrows, of New York, *Observations with Regard to the Translation of the New Testament into Modern Greek, with Reference to the Recent Disturbance at Athens*.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES ; OTHER NEWS

HAROLD N. FOWLER, *Editor*

49, Cornell Street, Cleveland, Ohio

GENERAL AND MISCELLANEOUS

AMERICANISTS. — International Congress. — The Thirteenth Session of the International Congress of Americanists will be held in the halls of the American Museum of Natural History, New York City, October 20–25, 1902. The object of the Congress is to bring together students of the archaeology, ethnology, and early history of the two Americas, and, by the reading of papers and by discussions, to advance knowledge of these subjects. Communications may be oral or written, and in French, German, Spanish, Italian, or English. All debates are expected to be brief, and no paper must exceed thirty minutes in delivery. The papers presented to the Congress will, on the approval of the Bureau, be printed in the volume of Proceedings. Members of the Congress are expected to send, in advance of the meeting, the titles, and, if possible, abstracts of their papers, to the General Secretary. The subjects to be discussed by the Congress relate to: (I) The native races of America, their origin, distribution, history, physical characteristics, languages, inventions, customs, and religions; (II) The history of the early contact between America and the Old World. All persons interested in the study of the archaeology, ethnology, and early history of the two Americas may become members of the Congress by signifying their desire to Mr. Marshall H. Saville, General Secretary of the Commission of Organization, American Museum of Natural History, New York, and remitting, either direct to the Treasurer (Mr. Harlan I. Smith, American Museum of Natural History) or through

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Dr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the JOURNAL material published after December 31, 1901.

For an explanation of the abbreviations, see pp. 99, 100.

the General Secretary, the sum of \$3.00 in American money. The receipt of the Treasurer for this amount will entitle the holder to a card of membership and to all official publications emanating from the Thirteenth Session of the Congress. Mr. Morris K. Jesup is President, and the Duke of Loubat Vice-President, of the Commission of Organization.

FEODOSIA. — Greek Coins. — In a brickfield near Feodosia, on the east coast of the Crimea, according to a letter in the *Vossische Zeitung*, a vessel containing about a thousand ancient Greek copper coins of various sizes has lately been dug up. On one side of the coins the letters ΠΑΗ are inscribed, on the other side is the head of Pan. Pan was the tutelary god of Panticapæum, the old Milesian colony upon whose site Kertch now stands. The coins are in good preservation. They bear, besides the inscription, a quiver and an arrow. (*Athen*. July 31, 1901.)

MOKIEWKA. — Scythian Armor. — A discovery is reported from St. Petersburg in the *Vossische Zeitung*. Lieutenant-general Brandenburg was commissioned by the Artillery Museum in S. Petersburg early in June to excavate the Scythian burial mounds near the village of Mokiewka in the Tschigivn circuit. In one of these grave mounds he came upon the skeleton of a Scythian warrior in complete armor. The whole of the armor was in excellent preservation. Hitherto only isolated parts of the Scythian panoply have come to light. The armor has been carefully packed and forwarded to St. Petersburg, where it is at present on view in the Artillery Museum. (*Athen*. August 10, 1901.)

NISCH (SERVIA). — Roman Coins and a Head of Constantine. — At Nisch (Naissus), in Servia, a number of Roman coins and other antiquities were found in August, 1900. These are described by M. M. Vassris in *Röm. Mith.* 1901, pp. 47-56 (3 figs.). Most important is a large bronze head, which is thought to have belonged to a statue of Constantine the Great, and is regarded as the best existing example of the work of that time.

AMRA (ARABIA). — The Castle. — In the *Neues Wiener Tageblatt*, ALOIS MUSIL and his associate MIELICH describe their visit to the castle of Amra, about 140 miles east of Jerusalem. The castle, hitherto inaccessible to Europeans, proved to contain important treasures of antiquity. It was built before the time of Christ, and has been uninhabited for thirteen hundred years. The explorers are to publish a book with a full account of the castle. (*Biblia*, November, 1901.)

LOCAL MUSEUMS IN TURKEY. — In *S. S. Times*, November 9, 1901, H. V. HILPRECHT describes the growth of the Archaeological Museum at Constantinople, and announces that local museums are to be established in the chief towns of the Ottoman Empire, the first of which are to be at Baghdad, Koniah, and Jerusalem. At the latter place there is already the beginning of a museum, formed chiefly from the discoveries of the Palestine Exploration Fund.

CATALOGUE OF CASTS. — P. P. Caproni and Brother, of 1914-20, Washington Street, Boston, Mass., have issued an illustrated catalogue (1901), in which the casts for sale by the firm are represented. These number about fifteen thousand, chiefly classical and Renaissance subjects.

NECROLOGY. — Charles Chipiez. — Charles Chipiez, best known by his share in the *Histoire de l'Art dans l'Antiquité* of Perrot and Chipiez, died

at Paris, November 9, 1901, aged sixty-six years. He was the author of numerous articles and monographs on the architecture of many epochs and stages of civilization, a practical architect, member of the Société Centrale des Architectes Français, and an officer of the Legion of Honor. (*Chron. d. Arts*, November 16, 1901; *Athen.* November 30, 1901.)

Hermann Grimm.—The recent death of Hermann Grimm leaves a far greater blank than many a more distinguished writer, for with him passed away one of the last links that connected this century with Germany's great classical period. Hermann was born in Cassel in 1828. He was brought up in all the traditions of the Goethe school; and he did them credit, though his was not a creative mind. His poems and novels were of small importance, but his works on art were exceedingly popular, for he possessed the power of presenting his ideas in clear and pleasant form, free from all disfiguring pedantry. His life of Michael Angelo, perhaps his best-known work, is written in German worthy of Goethe's disciple, but it was as an essayist that he excelled. Grimm, who for many years filled the position of Art Lecturer at Berlin University, had long been ailing, but his interest in art and literature remained undiminished to the last. (*Athen.* July 13, 1901.)

Émile Lambin.—Émile Lambin, whose writings on Gothic flora have attracted considerable attention, died at Paris, September 19, 1901, aged 65.

EGYPT

A YEAR'S EXPLORATION OF EGYPT.—The following brief sketch of the results of excavations in the season of 1900–01 is taken from *Biblia*, November, 1901, pp. 256–260.

At **El Amrah**, a few miles south of Abydos, Messrs. Wilkin and Randall-MacIver showed how the types prevailing in the pre-historic times, whether in the forms of vessels or materials employed, or in the construction of tombs, merge gradually into those which are known to have existed in the first dynasty. They also found on a carved slate, which is known as a type of the middle of the pre-historic age, an emblem in bas-relief so curiously resembling the general character of the hieroglyphs, though not identified with any particular one, that it is believed to be the earliest recorded example of the primitive writing.

At **Abydos** Professor Petrie has continued his work of identifying the royal tombs of the first and second dynasties, despoiled by his predecessor, and so arranging the chronology of that time. But his search has been even more fruitful. In the tomb of Zer, placed as Mena's successor, and therefore the second king of Egypt, was found a female arm wrapped in its original cloth, which on being unrolled yielded a unique and valuable set of jewelry, with designs in gold, turquoise, lazuli, and amethyst. These were restrung as found, and remain at Gizeh, by far the oldest and most perfect set of the ancient Egyptian jewels. A further example of the art of that reign were two lions in ivory.

The handle of the royal land-measuring cord of King Den and two large stones inscribed with the name of Perabsen are also relics of importance; but the richest find comes from the tomb of King Khasekhemui. Here were found the royal sceptre, in good preservation, seven stone vases with gold covers, two gold bracelets, and twenty copper dishes. (An account of

these discoveries is given by G. STEINDORFF, *S. S. Times*, December 21, 1901. See *Berl. Phil. W.* November 9, 1901.) With the aid of the objects recently discovered we can now trace the progress of the indigenous Egyptian people from the pre-historic stage to the second dynasty. Nothing forces us to assume the immigration of a New Race.

The gap in our knowledge between the second dynasty and the fourth is filled to some extent by the discoveries of Mr. John Garstang. From **El Alawniyeh**, working slowly northward during the winter months, a pre-historic burial ground and two settlements of the same period were examined in turn. An undisturbed burying site of the Old Empire yielded some results of interest, including a number of the curious "button" seals, which the explorer believes may have been the real ancestor of the scarab that in later times became so popular, and a set of alabaster vessels of rare quality with a long gold necklet and jewels, which remain in the museum at Cairo.

Later in the season Mr. Garstang's attention was called to a large construction described as an ancient fort, high up in the desert from **Beit Khallaf**, westward from **Girga**. A secret stairway revealed itself, and soon the name of Neter Kha, impressed upon the seal of a wine jar, made clear the importance of the discovery. This name was already known as that of the builder of the famous step pyramid at Saqqara, the oldest of those great monuments of early Egypt. From an adjoining mastaba, built in imitation of the step pyramid, came also a name new to history, Hen Khet, being the king apparently who succeeded the former. In the site around were large mastabas of the servants of these kings; the plans of their tombs at once supplied the missing link with those of the earlier times. Meanwhile the excavation of the great tomb showed the stairway to descend under an arch — the earliest known — steeply into the sand, and to be protected at intervals, porteullis-wise, by massive doors of stone. Eventually, at a depth of ninety feet from the surface of the mastaba, were found eighteen underground chambers, disturbed and plundered, yet filled with relics. (In *Athen*. November 9, 1901, it is stated that excavations at this site are to be continued by Mr. Garstang, the expenses being borne by private persons.)

At **Naga Dêy**, on the opposite side of the river, Dr. G. A. Reisner has also achieved important results for the University of California. The period of his finds embraces all those considered above, with which his results work out in striking analogy and confirmation. In addition to a large set of vessels of alabaster, slate, diorite, and other stones, he has nearly twenty of the early stone cylinder seals, which are now attracting much attention; a gold seal with the name of Mena, and a gold pendant bearing the name sign of This. His gold jewels form a remarkable collection.

At **Abu Sir**, still bearing on the Old Empire, Dr. H. Schäfer and Dr. L. Borchardt, for the Germans, have continued their work on the site of the temples of Ra and of the Obelisk. The startling find is a great brick-built boat of Ra, on the south side of the temple; but of equal importance is their uncovering of traces of the inclined planes by which the buildings were constructed — confirming at last a much-abused theory.

At **Thebes**, Mr. Percy Newberry continues his untiring labors among

the private rock tombs. The burying place of Rekhmara has not been found, but much valuable copying and exploration has been done. In the débris before one tomb were found three bronze dishes, perfect specimens of the art of their time, in each of which is an ox in the centre, so that when the bowl is filled the animal appears to be standing in the fluid and drinking from it.

In the **Fayoum**, Messrs. Grenfell and Hunt have also continued their regular labors. They have again been fortunate in the number of papyri found, but unhappily many will be unserviceable on account of the damp. With a view to escaping from this constant danger they have been inspecting a site in upper Egypt for next year's work.

The official work of the department has been continued with conspicuous energy. At **Karnak**, the fallen columns and those in danger have been removed and numbered, with a view to being rebuilt. At **Thebes**, Mr. Carter has prepared for public view the three royal tombs of Thothmes I and III and of Amenhotep II. At the Gizeh Museum a late acquisition, in addition to the share of excavation finds, is a large statue of Merenptah from Eshmunéin. [See below.]

MASPERO, *C. R. Acad. Insc.* 1901, pp. 615 f., mentions the discovery at **Boichèh** of an intact tomb of the twelfth dynasty, excavation on the site of a Graeco-Roman necropolis at **Saïs**, and the discovery, at **Eshmounéin**, of the ruins of a great temple, with a gate of the twelfth dynasty and a colossus of Rameses II, appropriated afterwards by Menephtah. [An account of discoveries in 1900-01 is contained in the *Archaeological Report* of the Egyptian Exploration Fund, 1900-01, pp. 1-9, 15, 18-25.]

ABU ROASH.—**French Excavations.**—In *C. R. Acad. Insc.* 1901, pp. 616-619 (pl.), is a report by E. CHASSINAT on his excavations at Abu Roash. He excavated the site of the chapel belonging to the ruined pyramid. Of the chapel nothing remains, but inscriptions were found showing that the pyramid was that of King Didoufri, one of the earliest kings of the fourth dynasty. A finely-executed head of the king also came to light.

ABYDOS.—**Petrie's Discoveries.**—In *Harper's Monthly*, October, 1901, pp. 682-687 (8 figs.), W. M. FLINDERS PETRIE writes on 'The Royal Tombs at Abydos,' giving a popular account of recent discoveries, which have made known the names of four pre-dynastic kings, Ka, Zeser, Narmer, and Sam. Their date is about 4900 to 4800 B.C. A summary of this article is given in *Biblia*, November, 1901, pp. 249-251. An extract from a letter of PETRIE to the *New York Journal* is given *ibid.* October, 1901, pp. 240-242, and a summary account of the discoveries at Abydos, compiled from the volumes of the Eg. Ex. Fund for 1900 and 1901, is given *ibid.* August, 1901, pp. 149-152.

ANTINOË.—**The Excavations.**—In *R. Arch.* XXXIX, 1901, pp. 77-92, is an extract from a lecture by AL. GAYET, describing his fifth campaign of excavation at Antinoë. The chief interest centres about the cemeteries of late Roman times. Here corpses were found still swathed in their funeral garments, and painted and embroidered cloths show the costumes of the time. The necropolis of the time of the twelfth dynasty has been discovered some miles below Antinoë. No objects of unusual interest have been found in the tombs there.

SAKKÂRA.—**The Pyramid of Unas.**—Excavations have been continued, under Barsanti's supervision, about the pyramid of Unas (cf. *Am. J. Arch.* 1901, p. 332). The underground chambers were found as was expected, but contained little of interest. The chapel is much ruined, but the fragments show that it had a portico with at least eight monolithic columns which had palm-leaf capitals. A tomb of the Saïte period was also discovered. (MASPERO, *C. R. Acad. Insc.* 1901, pp. 614 f.)

THEBES.—**Restorations and Discoveries.**—At Thebes, the temples have been provided with gates to protect them from injury, and the repairs of the temple of Karnak, made necessary by the fall of the columns in 1899, have been finished. The thorough clearing out of the ruins has led to happy results: the discovery of statues of the twelfth dynasty at the pylon of Thutmosis III, and, at the temple of Khonsu, of the statue of Khonsu, erected by Harmhabi, in his own likeness. (MASPERO, *C. R. Acad. Insc.* 1901, p. 615; pl.)

An Egyptian Figure South of the Zambesi.—In *Biblia*, October, 1901, pp. 242-243, is a communication from Dr. CARL PETERS, to the *London Times*, concerning an Egyptian figure found south of the Zambesi river. Professor PETRIE declares that the figure is certainly ancient, has been buried in moist earth (*i.e.* not in an Egyptian tomb), and has not been kept long by an Arab. On the chest is the cartouche of Tahutmes III (about 1450 B.C.), of the eighteenth dynasty. The discovery of such a figure in South Africa may open new problems or reopen old ones in Egyptian history.

A New Periodical.—The first volume of *Le Musée Égyptien*, "recueil de monuments et de notices sur les fouilles d'Égypte," has appeared. The purpose of this periodical is to reproduce in the best manner possible the literary and archaeological treasures of the Bulaq Museum. The first volume, with forty-two plates, contains chiefly Egyptian inscriptions and pictures, with fresh data on the life and history of the Egyptians. (*Nation*, September 12, 1901.)

Egyptian Antiquities sent to Pittsburg.—The Pittsburg Museum (U.S.) has received from London eight large cases of antiquities from Egypt, which were allotted to the Museum by the Egypt Exploration Fund. Among these are a drinking vessel and numerous small objects from the tomb of King Ka, an engraved ebony tablet, a bar of gold engraved with the name of King Menes, and the sarcophagus of a princess of the family of King Zer, whose date is not far from 4700 B.C. There are hundreds of other objects of various interest and importance. (*Biblia*, January, 1902, p. 337.)

BABYLONIA

BABYLON.—**Discoveries of the German Expedition.**—The German expedition, headed by Koldewey, has discovered the throne room of Nebuchadnezzar, a magnificent structure, 18 m. wide and 52 m. long, directly opposite the entrance of which is the niche where once stood the king's throne. On both sides of the niche are important remains of the colored decoration of the walls. In addition to this work in the old castle, or *Kasr*, and in the processional street of Marduk, the Germans have been excavating in the city proper, near the village of Jimjima, and have found many tablets inscribed with letters, psalms, contracts, word lists, etc., of

great interest. The work is to be extended to the hill called Amrain-bar-Ali, where rich returns are expected. The expedition has obtained the right to excavate the neighboring hills of Fara and Abu Hatab, which probably belong to the pre-Sargonic period, the fourth millennium before Christ. These hills are near Nippur, where the expedition of the University of Pennsylvania has obtained its important results. Individual members of the German expedition have been publishing the results of their private studies, among which a pamphlet, *Von Babylon nach den Ruinen von Hira und Huarnag*, by BRUNO MEISTER, deserves special mention. (*Independent*, November 7, 1901; cf. *Biblia*, November, 1901, pp. 271-272; *Berl. Phil. W.* November 9, 1901.)

According to a further report of the *Deutsche Orient-Gesellschaft*, by which the expedition was sent out, Koldewey has discovered a temple of Adar or Ninib, the tutelary god of the physicians. About four hundred bricks were found, but the inscriptions on the majority have not yet been deciphered. One contains the litany sung by the choruses when the god Marduk returned from the procession to his temple, which was discovered last winter by the explorers. (*Athen.* December 14, 1901.)

SYRIA AND PALESTINE

TRAVELS IN PALESTINE.—In the *Mittheilungen und Nachrichten des Deutschen Palaestina Vereins*, 1900, pp. 65-77, 49-56 (6 figs.), and 1901, pp. 1-9 (4 figs.), Dr. SCHUMACHER continues his report of his travels and investigations east of the Jordan. His investigations are, so far as here recorded, topographical. *Ibid.* 1900, pp. 56-64, 77-80, and 1901, pp. 9-14, D. J. SAUL describes his trip from El-Akabe to Jerusalem by way of Gaza. In *Z. D. Pal. V.* 1901, pp. 113-126 (7 figs.), LUCIEN GAUTIER describes a trip in the region of the Dead Sea and the land of Moab.

DSCHERASCH.—**Inscriptions.**—In the *Mittheilungen und Nachrichten des Deutschen Palaestina Vereins*, 1900, pp. 41-44 (5 figs.), G. SCHUMACHER publishes seven inscriptions from Dscherasch. One is from the lintel of the door of the Mausoleum (No. 15), two are dedications to Masculinius (Nos. 16 and 17), two others refer to the same person (Nos. 18 and 19), and one is a milestone. Two much-defaced busts probably belong to the monument of Masculinius.

JERUSALEM.—**A Tomb with Hebrew and Greek Inscriptions.**—In the *Mittheilungen und Nachrichten des Deutschen Palaestina Vereins*, 1900, pp. 33-37 (6 figs.), P. BONAVENTURA LUGSCHNEIDER describes a recently discovered tomb just outside of Jerusalem. Three square chambers have been opened, and a fourth chamber appears to exist. Twenty-nine ossuaries were found. The inscriptions are discussed by E. KAUTSCH, *ibid.* pp. 37-41. They are in Hebrew and Greek, and appear to date from the last century before or the first century after Christ. A note by G. DALMAN, on the Hebrew inscriptions, is to be found *ibid.* pp. 82 f.

The Fountain of Siloah.—The fountain of Siloah has been cleaned, and the wall through which the water from the fountain of St. Mary leaked away has been cemented. The fountain of Siloah is, therefore, now again supplied with water. In the course of the work the construction of the fountain or basin was examined. Further investigations show that a second chamber, connecting with the first basin, was also a water-holder.

From this a passage opened, which apparently served as a means by which the fountain could be approached and its supply of water regulated. (C. SCHICK, *Mittheilungen und Nachrichten des Deutschen Palaestina Vereins*, 1900, pp. 45, 81 f.)

THE MADABA MOSAIC.—The French Academy of Inscriptions recently resolved to undertake the cost of a reproduction of the mosaic chart of Madaba, which is so important a record of the topography of ancient Palestine, with an exact rendering of the colors of the original. (*Athen.* August 31, 1901.)

SERDJILLA.—**A Mosaic Pavement and Inscription.**—In *R. Arch.* XXXIX, 1901, pp. 62-68 (1 pl.; 1 fig.), HOWARD CROSBY BUTLER publishes a mosaic found in a bath at Serdjilla, in Syria. The outer border consists of a simple pattern of inclined squares. Within this is a second border,—a running plant treated as scroll work, with birds, fruits, and disks inserted in the open spaces. The main body of the mosaic contains a tiger killing a gazelle, a lion killing a wild ass, a bear running at full speed, a gray animal of feline form pursuing its prey, two birds, and a tree. In the part of the mosaic not uncovered were doubtless other animals. Each figure is outlined in black. The other colors used are in part naturalistic, the tiger being striped black and orange, blood being red, etc., but gray and brown shades are much affected. The designs are inspired by ancient traditions, and the composition and technique are excellent. A medallion in the middle of the mosaic contains an inscription which is discussed by WILLIAM KELLY PRENTICE, *ibid.* pp. 68-76. It is written in bad hexameters, and records the fact that Julianus, son of Thallasius, and his wife Domna gave the pavement (and probably the bath). The bath was finished in July, 473 A.D. The date (the month of Panemus, year 784, indiction 11) is reckoned from the Seleucid era.

SIDON.—**A Gold Plaque.**—In *C. R. Acad. Insc.* 1901, pp. 565-567 (fig.), C. CLERMONT-GANNEAU publishes a gold plaque from near Sidon. Asclepius and Hygieia are represented standing. Asclepius is half draped and bearded. His serpent twines about his staff. Hygieia is fully draped and holds a serpent which she is feeding from a dish. Between these two figures stands a diminutive Telesphorus. The work is poor, but purely Hellenic, with no Semitic elements.

A Temple of Eshmoun.—At Bostân esh-Shaykh, about an hour's ride north of Sidon, the emissaries of the Ottoman Museum have discovered ruins of a Phoenician temple identified by an inscription as that of Eshmoun. Five inscriptions were found, one of which, in two lines, begins "May Eshmoun bless," while two larger ones, identical in contents, give the name of "King Bad'-Ashtoreth, king of the Sidonians, grandson of King Eshmoun 'azar, king of the Sidonians," and mention the temple which he built for Eshmoun, "the holy priest-prince." (H. V. HILPRECHT, *S. S. Times*, December 21, 1901.)

TELB-ERH-CHIBÂH.—**An Egyptian Stele.**—At the last meeting of the Paris Académie des Inscriptions, CLERMONT-GANNEAU reported his discovery at Telb-erh-Chibâh, near Mzeiris, to the south of Damascus, of 'an Egyptian stèle of Pharaoh Seti I of the Nineteenth Dynasty,' which proves that the Egyptian conquests had extended far towards Syria at a time when the Israelites had not yet settled there. (*Athen.* Nov. 9, 1901.)

ASIA MINOR

AN ARCHAEOLOGICAL JOURNEY.—The *Berl. Phil. W.* October 26, 1901, states, on the authority of the *Vossische Zeitung*, that Dr. BELCK has discovered at Amasia a fine Greek inscription of Pharnaces of Pontus, son of Mithradates, cut in the rock. Amasia was in ancient times impregnable. Dr. Belck also visited the fortress of Tokat, Gümenek (Comana Pontica), where he measured the ruins of the temple and found several inscriptions, Niksar (Neocaesarea), the ancient Cabira, where was the treasury of Mithradates, Herek (Eupatoria), and Ladik (Laodicea). Further information is given, *ibid.* December 28, 1901. Zilch, the ancient Zela, was found to be upon a natural hill, not an artificial mound. At Kalehissar, Hittite sculptures and a badly weathered inscription were found. At Uyük a new figure of a lion came to light, and Belck found that the whole hill is 870 m. in circuit, and that about 12 m. of its height is artificial. The whole ruin is perhaps that of a temple, which dates from about 2000–1500 B.C. At Boghazkiö, some 25 km. south of Uyük, several hitherto unnoticed figures were added to the procession represented in the rock cut relief. The place was no doubt used as a temple or sanctuary. The ancient city about 2 km. from Boghazkiö is not Pteria, but some other city, which was built about 1500 B.C., and destroyed about 700 B.C. Belck has partly deciphered a great Hittite inscription, in ten lines, which nobody had copied before on account of its badly weathered condition. It probably has reference to the foundation of the city. Within the city are remains of several towers. Many fragments of clay tablets with Assyrian writing were found. At Nefezkiö, probably the ancient Tavia, many remains of Greek columns and sculptures were found. From Caesarea Belck went through Cappadocia. He found proof of the existence of a great Cimmerian power here, about 700–585 B.C. The Moschi (identical with the present Georgians) lived in Cappadocia about 750–640 B.C., when they were expelled by the Cimmerians. Kara Uyük, near Caesarea, was a town of the Moschi, and is the place from which the Cappadocian cuneiform inscriptions came. Belck also found a great Hittite inscription, apparently relating to the foundation of a city near the ruins of which it was discovered. Another Hittite inscription on the body of a king's statue was found at Bor. Tyana was recognized as the site of a Turanian city destroyed about 680 B.C., probably by the Cimmerians. Several cities of Cilicia were visited. At Caesarea two Hittite inscriptions were found.

INSCRIPTIONS FROM VARIOUS PLACES.—In the *R. Ét. Gr.* XIV, 1901, pp. 295–305, A. E. CONTOLEON publishes thirty-seven inscriptions. Ten are from Smyrna and the neighborhood, five from Tralles, four from Koula, in Lydia, and three from Philadelphia. The rest are from various places in Asia Minor. Nearly all are votive inscriptions or simple epitaphs, though there are a few fragmentary decrees. None seems to be of earlier date than Roman times.

Twenty new inscriptions from Mysia, with some corrections on those previously published, are given by J. A. R. MOXRO in *J.H.S.* XXI, 1901, pp. 229–237. To be noted are the identification of Balat with Hadrianeia, the discovery of a probable site for Hadrianotherae and the occurrence of the singular of the Homeric *εἰνάρητες*. A financial decree of the fourth or third century B.C. and a statue-base of a priest of Zeus Idaeus are from Scepsis.

COS. — Various Discoveries. — During a five months' stay on the island of Cos in 1900, R. HERZOG not only found hundreds of inscriptions, his primary object, but also discovered the island to be full of monumental evidence of every kind and from all periods of its history, Carian, Greek, Roman, Byzantine and Mediaeval. The Asclepieum was not found, but among the discoveries made in trial excavations were an unusually fine Orpheus-mosaic now in Constantinople, a curious wall with piers and movable panels like a proscenium and a fountain-shrine of Demeter and Cora with many small objects like those from Eleusis. A survival of pre-Hellenic script similar to the Cretan was found among the masons' marks on Greek fourth century building blocks. The whole island is a most promising field for systematic excavation. (*Arch. Anz.* 1901, pp. 131-140; 7 cuts.)

ERYTHRAE. — The Existing Remains of this City. — In *Athen. Mith.* XXVI, 1901, pp. 103-118 (pl. vii; 3 cuts), G. WEBER describes the existing remains of Erythrae, correcting some of the earlier notices. The Hellenistic wall can be traced through most of its length, and in some places reaches a height of 5 m. The thickness varies from 4.40 m. to 5.20 m., and at irregular intervals are found remains of towers. The Acropolis was much altered in Byzantine times, but the inner fortifications, apparently, like the outer wall of the fourth century B.C., can be traced in places. The theatre is the chief ruin, but of this nothing is now visible except scanty remains of the seats. The temple of Athena Polias seems to have been on the Acropolis, but no traces of it remain. The Heracleum is probably to be sought, not where Hamilton suggests, but near the sea, where are a fragment of an archaic Ionic capital and other architectural remains. Other traces of ancient buildings of but little importance are still visible. The city was supplied with water from the mountains to the east by a conduit containing clay pipes, and there are also remains of wells. The city existed in Byzantine times, to which belong the ruins of three churches, the transformation of the Acropolis, and an aqueduct which pierces the ancient wall at the south. The site has been thoroughly plundered and the ancient remains largely destroyed. Recent terracing for vineyards has contributed to this destruction. Nine hitherto unpublished inscriptions, honorary, dedicatory, or funerary, but of little importance, conclude the article.

LAMPSAKI. — A Gilded Terra-cotta Vase. — In *C. R. Acad. Insc.* 1901, pp. 297-298, S. REINACH, on behalf of Hamdy Bey, describes a vase found in a tumulus at the *Caza* of Lampsaki, on the road from Dardanelles to Lampsacus. It is 0.52 m. high, has three handles (one broken), and is completely gilded. On a blue band a hunting scene is represented in colored relief. A white boar is attacked by three men and three dogs. Blue and red are among the colors employed. The vase belongs to the time of Alexander and is an important specimen of ceramic ware made in imitation of metal.

MILETUS. — The German Excavations. — In *Berl. Phil. W.* October 26, 1901, is a summary of KEKULÉ v. STRADONITZ's report to the Berlin Academy on the excavations at Miletus from September to the end of the year 1900. The streets and the water supply were investigated, the Hellenistic and later walls were traced and examined, and a market place, perhaps the agora, perhaps one of the emporia of the city, was found near the harbor. The "theatre-like building" found in 1899 is now seen to be the

bouleuterion. This is proved by an inscription, which also shows that the building was erected about 200 B.C. Numerous pieces of architectural and other sculpture were found. At one point was a standing archaic female statue with a bird held at the breast, several seated statues, and an archaic bull. This was probably the site of the temple of Artemis. Several mosaics came to light, among them one with busts of the nine Muses in the order given by Hesiod. At a point halfway to Didyma a heroum was partially excavated.

MOCISSUS.—**A New Hittite Inscription.**—A “Hittite” inscription, written *boustrophedon*, in characters well advanced toward the linear stage, is published by J. G. C. ANDERSON in *J.H.S.* XXI, 1901, p. 323. It is incised on the rock of a mountain fortress north of the upper Halys, near Mocissus.

PERGAMUM.—**Further Excavations.**—The *Berl. Phil. W.* October 26, 1901, quotes from the *Reichs-Anzeiger* the statement that the excavations at Pergamum are being continued by Dörpfeld, and that a long inscription with police regulations concerning streets, water works, boundary walls, fountains, etc., has been found.

RHODES.—**Inscriptions.**—In *Hermes*, XXXVI, 1901, pp. 440-444, F. HILLER VON GAERTRINGEN publishes four Rhodian inscriptions. The first, on a stone once the base of a statue, gives name and titles of a certain Pausanias, who had been phylarch, trierarch, and choregus. The date is probably the second century B.C. The importance of the offices mentioned is discussed. The second inscription is on the same block as the first. Lysanias, son of Parmeniscus, set up a statue of Antipater, son of Dionysius. The artist was Phantias, son of Phantias, a Rhodian. The third inscription records the setting up by the Rhodian senate and people of a statue of Aristides, son of Xenombrotus, who had held several priestly offices. The date is not earlier than the first century B.C. The third inscription is copied from the journal of Ludwig Ross, who saw it in 1843. It supplements *I. G. Ins.* I, 93, recording the crowning of the Rhodian people by the people of Thasos.

SINOPE.—**Inscriptions.**—In the *Revue des Études Anciennes*, 1901, pp. 352-357, D. M. YÉRAKIS publishes (from the *Buğavris*, of Constantinople, September 11, 13, and 17) seventeen inscriptions from Sinope. Three are in Latin, the rest in Greek. Five are stamps on vase handles. One Latin inscription is a dedication to M. Aurelius Antoninus, another mentions the *legio XXII primig(enia) p(ia) f(idelis)*. One of the Greek inscriptions is a list of names (which may be a part of a decree or other document); another honors a certain Claudius Potelius (?) for his munificence.

SMYRNA.—**A Milestone.**—In the *Revue des Études Anciennes*, 1901, pp. 349-351, A. FONTRIER publishes the inscriptions of a milestone found at Bunarbaschi near Smyrna. It was the eighth milestone on the road to Sardis. It has two fragmentary Latin inscriptions, one of which mentions Diocletian and Maximianus, the other, apparently Constantine and his sons, Constantine II and Constantius II. A third inscription, in Greek, may perhaps mention Aurelian.

THYATIRA.—**Inscriptions.**—In the *Revue des Études Anciennes*, III, 1901, pp. 265-268, A. FONTRIER and P. FOURNIER publish three inscriptions from Thyatira. The first gives the name and numerous titles of

A. Julius Nicomachus, who is honored by the senate; the second commemorates Athenades, son of Pythodorus, victor in the boys' *diaulos* at the *Romaea* in Ephesus; the third states that Aur. Alexander, son of Antiochianus, made the two gates.

THRACE

SALONICHI.—**A Latin Inscription.**—P. N. P. publishes the following inscription from Salonichi in *Berl. Phil. W.* September 14, 1901: *M. Oppio Maximo M. Oppius | Philomusus pater | et Oppia Rufa mater.*

SIATISTA.—**A Relief with Inscription.**—In *Berl. Phil. W.* December 14, 1901, P. N. PAPAGEORGIU describes a relief found near Siatista and now at Salonichi. It is much injured. In the middle is a draped Apollo (whether standing or seated is uncertain), playing a lyre. The fragmentary inscription was a dedication by an Alexander in behalf of his son Parmenio, in accordance with written prescription [*ἀπὸ*] *προ[γραφῆς]*.

GREECE

ARCHAEOLOGY IN GREECE IN 1900-01.—In *Crete* new quarters of the palace at **Cnossus** equal in extent to those first found have been explored, notably a large hall reached by three flights of descending stairs, the only ancient instance of staircases one above another. There are articles from Babylonia, Nubia, and Egypt, including the lid of an alabastron with the name and titles of the little-known Hyksos king, Khyan; frescoes showing new costumes and phases of life; stucco reliefs, with a fleur-de-lis ornament and a style of sculpture resembling that of the Renaissance; further examples of Mycenaean linear script and cult-scenes, and a third system of signs. In the neolithic settlement beneath the Mycenaean, the earliest type of idol known in Greece or the islands was found. [See *Am. J. Arch.* 1901, p. 342; *Berl. Phil. W.* November 2, 1901. On the discoveries at **Gournia**, **Phaestus**, **Praesus**, **Sitia**, and **Zakro**, see below, pp. 71-73.]

In **Leucas** Dr. Dörpfeld continues his search for proofs of the Homeric Ithaca. At **Oeniadae** in Aetolia, ship-houses similar to those at the Piraeus have been found. At **Corinth** but little new work has been done; the base of a statue by Lysippus invites regret. The excavation of the temple of Athena Alea at **Tegea** has yielded important fragments of sculpture, among them a head, possibly by Scopas. The tenth season at **Delphi** was devoted to the group of temples outside the sanctuary to the southeast. They show some important remains of sculptural decorations, especially the *tholos*, which was famous in antiquity. A museum is being provided from the same private source as that at Olympia. At **Dimini**, near **Volo**, in Thessaly, a pre-Mycenaean hill-settlement shows a distinct local type of work, and recalls traditions of the independent and adventurous folk of Ioleus. Three cave-sanctuaries of the Nymphs and kindred divinities have been explored; one at the southern end of **Hymettus**, which yielded inscriptions from the sixth century down, and coins to beyond 400 A.D.; a second on the Attic side of **Parnes**, where small objects of gold were found, and a third in a ravine on **Aegina**.

At **Athens** the Russian Archaeological Institute has been granted a building site, and the French School has provided a building for its foreign students. Dr. Wolters has been succeeded at the German school by Dr. Schrader. The work of strengthening the Parthenon goes on, and is likely

to occupy the next two years. The approach to the Acropolis is being restored to its ancient form by the removal of earth. A room in the Central Museum is now given up to the pottery from the Acropolis. The lower part of the sunken ship-load of sculpture which is now being recovered at **Anticythera** proves to consist chiefly of marble copy-statues hopelessly defaced by the sea-water. Some further bronzes and minor works of art are more valuable. Among them is a statuette of a young athlete on a base of red marble. The bronze head at first called a boxer seems to be a fine Hellenistic portrait, possibly of some king. [On discoveries at **Aegina**, see below, p. 68.]

The Sieglin expedition at **Alexandria** is studying the street plan and the Serapeum. Two cemeteries, Hellenistic and Roman, have been explored, the latter showing a return to an Egyptian style of painting.

Events in Asia Minor are reserved for a later paper. (R. C. BOSANQUET, *J.H.S.* XXI, 1901, pp. 334-352.)

Work of the Greek Archaeological Society in 1900.—In the *Πρακτικά*, 1901, the work of the Greek Archaeological Society in 1900 is recorded. Excavations were carried on at fifteen places. In **Athens** the peribolus of the Olympieum was cleared, and two inscribed altars were found, one of which had a relief representing Artemis hunting; the work at the Stoa of Attalus (*Am. J. Arch.* 1900, p. 488) was completed; and the removal of earth about the Acropolis was begun. At Piræus the chief work was the investigation of the harbor and walls of Munychia. Here an inscription relating to the walls was found (*Am. J. Arch.* 1901, p. 98). At **Sunium** some simple ancient buildings and a base inscribed 'Απόλλωνος were discovered, but the chief result of the work was the laying bare of the fortification, which is one of the finest specimens of heavy ancient Greek masonry. The **Cave of Pan** on Mt. Parnes was investigated (*Am. J. Arch.* 1901, p. 341), and excavations at the fortress and the deme of **Phyle** brought to light remains of buildings, a few fragments of sculpture, and vases. At a place called *Καλύβια Κουβαρά*, in Attica, a statue of early "Apollo" type was found by private persons, and excavations by the Society discovered an ancient necropolis. On the work at **Eretria**, see *Am. J. Arch.* 1901, pp. 95 ff., 345. At **Rheneia** tombs containing vases with geometrical designs were opened, but the chief discovery was a small temple of Heracles, in which was the foundation for the statue. The statue itself—wanting the head, feet, and right hand—was found, and is a work of the first or second century B.C. A court with porticoes and a cistern adorned with marine representations in painting, relief, and mosaic, was before the temple. At **Chalcis** the gymnasium was cleared, and a great number of tombs was opened. In the gymnasium a fine mosaic (*Am. J. Arch.* 1901, p. 341) was found. Several early tombs were opened at **Volo** in Thessaly (*Am. J. Arch.* 1900, p. 493; 1901, pp. 345, 348). At **Mycenae** the work of clearing away the earth thrown outside the wall in Schliemann's excavations was begun. Just outside of **Sparta** the **Menelaëum**, a cenotaph consisting of three terraces of stone, the lowest of which measures 23.70 m. by 16.50 m. was excavated. Here several small lead idols were found. At **Andania** two mosaics were uncovered in a Roman house. One represents a hunting scene, and has also medallions containing busts, three of which are inscribed *Εὐνούδης*, *Εὐηνίω*, and *Ἰερώνας*. At **Epidaurus** the clearing of the sacred pre-

cinct was completed; the entrance of the Stadium was examined; a building of Roman date, under which were earlier foundations, was partially excavated, and a place east of the propylaea was investigated. Several inscriptions were found, one of which proves the existence of a temple of Telesphorus. A brief account of all these excavations is given in the *Πρακτικά*, pp. 11-19. More detailed reports are given of the excavations at the Olympieum, pp. 29-30 (G. N. NICOLAÏDES); at the Stoa of Attalus, pp. 31-35 (K. D. MYLONAS); in the Piraeus, pp. 35-37 (I. CH. DRAGATSES); at the Cave of Pan and at Phyle, pp. 38-50 (A. N. SKIAS); at Sunium, pp. 51-52 (B. STAËS); at Eretria, pp. 53-56 (K. KOUROUNIOTES); at Chalcis, pp. 57-66, with 3 figs. (G. A. PAPABASILEIOS); at Rheneia, pp. 67-71 (D. STAVROPOULOS); at Volo, pp. 72-73 (CHR. TSOUNTAS); at Mycenae, p. 73 (TSOUNTAS); at the Menelaëum, pp. 74-87, with 6 figs. (P. KASTRIOTES). A report on clearing and repairing in the odeum of Herodes Atticus at Athens is given (with 2 figs.) by A. N. SKIAS, pp. 88-94. In the course of this work a grave containing early pottery was discovered. The activity of the Society in repairing the monument of Philopappus at Athens, in preserving and restoring the monastery at Daphne, in strengthening the supporting walls of the temple at Sunium and the stadium at Delphi, is mentioned (pp. 19-20). The Society also undertook (p. 20) the building of local museums in several places, and made purchases for the National Museum and Numismatic Museum. A description of the statues found at Anticythera, with four reproductions of photographs, fills pp. 95-102 of the *Πρακτικά*. At the end of the volume are four views of the theatre at Epidaurus.

AEGINA. — Excavations at the Temple. — In *Berl. Phil. W.* August 3, 1901, pp. 1001-1005, A. FURTWÄNGLER gives the results of the excavations at Aegina after they were resumed June 9. The lower strata of the eastern terrace were examined. Here remains of early Doric buildings were found among the rubbish used in filling and grading the terrace, and below this material traces of other early buildings came to light. Between the eastern terrace wall and the rock a hollow space was filled with votive offerings. Here were Mycenaean idols of the goddess, often with a child on her arm, female idols of later times, birds, beasts, a tortoise, bronze fibulae, pins, and ornaments, a fine bronze statuette of a cock, many fragments of various kinds of vases, among them geometric and proto-Corinthian ware, Egyptian scarabs, and early Greek gems. Fragments of Argive bronze reliefs were found, among them one with a representation of Theseus and the Minotaur. A small torso of an archaic marble figure of the goddess, in long drapery, with one hand at her breast, also came to light. Many fragments of Naukratite vases, made especially for dedication to Aphrodite, were found. The most interesting discovery is a carefully cut archaic inscription, with letters 6 cm. high. It reads:

.. ΕΟΙΤΑ : ΙΑΡΕΟΣ : ΕΟΝΤΟΣ : ΤΑΦΑΙΑΙ : ΕΟΙΡΟΣ
 .. ΕΘΕ : (X?) ΟΒΟΜΟΣ : ΧΟΛΕΦΑΣ : ΠΟΤΕΠΟΕΘΕ
 ΝΙ.ΡΟΙΕΘΕ

"In the priesthood of Cleoëtas (?) a temple was made to Aphaia, and the altar and the ivory (statue) was added [and the wall?] was built round it."

A fragment of a dedication to Aphaia (here called 'Αφαῖα) was found in April. The old temple probably lay beneath the later structure. Pindar's lost ode to Aphaia was probably composed for the dedication of the new temple. Aphaia was a virgin goddess, similar to Britomartis, Dictinna, and Artemis. An extract from an article by FURTWÄNGLER in the *Beilage* of the *Münchener Allgemeine Zeitung*, 1901, No. 149, explains the nature of this goddess. Of the pediment sculptures few fragments were found. The terrace south of the temple was investigated and the excavation of the old building lying still farther south was finished. Two buildings west of the temple were excavated. One was a large house with a great hall in which were stone benches, — apparently a place for festive gatherings, — the other seems to have contained a reservoir. Half an hour's walk to the east of the temple an aedicula with Ionic columns was excavated. It was probably a nymphaeum. A small archaic nude female torso of stone and an excellent terra-cotta head of Pan were found here. Remains of large buildings of the classical period were found in the neighborhood. The mosaic with the inscription *C.I.G.* 9894 was laid bare in the town of Aegina. An inscription, found by chance at a distance from the excavations, appears to be an inventory from the sanctuary of Damia and Auxesia, in Oea, and among the votive offerings mentioned are many pins, *πρόνοι* (cf. *Hdt.* V, 88). Brief notes on the inscriptions mentioning Aphaia are contributed by R. MEISTER and FURTWÄNGLER, *Berl. Phil. W.* August 31, 1901. The excavations and their results are described and discussed by R. B. RICHARDSON, in the *Nation*, October 31, 1901. S. REINACH mentions the different names given to the temple in modern times, shows that even if no new evidence had been found we ought to have known that it was the temple of Aphaia, describes the newly found inscription, and discusses the nature of the goddess in *C. R. Acad. Insc.* 1901, pp. 524-537. [See also *Arch. Anz.* 1901, pp. 129-131; *Berl. Phil. W.* November 16, 1901, where it is stated that the publication of the discoveries may be expected soon, and that further excavations by the Bavarians are to be hoped for. A summary of FURTWÄNGLER's preliminary report ('Aiginetica. Vorläufiger Bericht über die Ausgrabungen auf Aegina,' *Sitzb. Mün. Akad.* 1901, iii, pp. 363-389) is given by Miss HARRISON in *Cl. R.*, 1901, pp. 473-475.] In *Berl. Phil. W.* December 21, 1901, A. FURTWÄNGLER gives a further report of the latest excavations. At the south side of the temple no important discoveries were made. At the east end, remains of earlier structures show that the existing temple was the fourth on the site. Here numerous archaic idols, fibulae, ornaments, etc., were found, among them a shell with Phoenician engraving. Parts of the horizontal cornice of the temple, with marks showing the position of statues, were recognized. Two of the earlier temples can be reconstructed. Eighteen types of roof tiles are now distinguished. A second fragment of the inscription from the temple of Damia and Auxesia, at Oea, has been found, and the inscription, which is now complete, is published by FURTWÄNGLER. The goddesses are here called Mnia and Auzesia. The inscription belongs to the fifth century B.C., and gives an inventory of the contents of the temple, in which each goddess had a separate cella. Mnia had even a separate opisthodomus, in which was a statue of Dionysus. In general, the contents of the temple are not valuable, but consist of such articles as might be expected in a rural sanctuary.

ANTICYTHERA. — Further Discoveries. — The *Berl. Phil. W.* December 28, 1901, on the authority of the *Vossische Zeitung*, announces the discovery at Anticythera of further objects from the sunken vessel. (See *Am. J. Arch.* 1901, pp. 92, 339.) A marble horse with elaborate trappings, the third horse found here, has come to light. On the breast are reliefs, among them a head of Medusa. Several fragmentary statues, all badly injured by the water, a number of bases, a hand, a finely executed foot, with sandal and straps, and a variety of vases, several of which have inscriptions telling the measure of their contents, and numerous articles of finely colored glass ware, some of which are decorated with reliefs, are among the discoveries. The cleansing of these objects will be a work of some difficulty. The bronze "Hermes" can be restored, though with difficulty. The custodian of the "Kunsthistorische Sammlung" of the Museum at Vienna, W. Sturm, offers to undertake the work, if the fragments can be taken to Vienna.

ATHENS. — A Lamp with Representation of a Scene in a Mime. — In *Athen. Mith.* XXVI, 1901, pp. 1-8 (pl. i), C. WATZINGER publishes a small hanging lamp of terra-cotta, found in the German excavations on the west slope of the Acropolis. The lamp is of brick-red clay covered with a dark red slip, a technique hitherto unknown in lamps, but found in terracottas and vases of the latter part of the third century B.C., marking the transition from the black glaze of the earlier time to the *terra sigillata*. On a base, which held the oil, stand three figures, evidently a slave, in a difficult situation, an old man turning from the slave in anger, and a young man, watching the scene with interest; all are most successfully characterized. On the back is an inscription, *μιμολῳγοι | ἡ ὥπόθησις | εἰκνρα*. The three mistakes in as many lines show the ignorance of the potter. *Μιμολῳγος* was hitherto unknown in a pre-Christian document; it clearly means "performer of minus." The second line indicates the character of the mime, as possessing a plot (cf. *Plut. Symp.* VII, 712 E), while the third line is the title of the piece. The lamp is therefore important for the history of the Greek mime, as giving us the title of a new piece, and especially as showing that as late as the end of the third century there were mimes which were *δράματα* and performed by three actors. The view that the mime was not a dramatic piece can no longer be maintained.

Meetings of the German Institute. — At the open meetings of the German Institute in Athens during 1901 the following papers have been read: January 2: W. DÖRPFELD, 'The New Excavations at Pergamum.' January 15: A. WILHELM, 'Inscriptions from the Acropolis'; E. KRÜGER, 'Portrait of a Poet, in Relief.' January 30: C. WATZINGER, 'Small Objects from the West Slope of the Acropolis'; W. DÖRPFELD, 'The Stage of the Greek Theatre.' February 13: H. VON PROTT, 'The Panionion'; I. SVORONOS, 'Coins with the Representation of the Tholos at Epidaurus.' February 27: C. WATZINGER presented STRZYGOWSKI, '*Orient oder Rom?*'; S. WIDE, 'A Local Species of Boeotian Vases'; R. B. RICHARDSON, 'The Excavations at Corinth in 1900.' March 13: A. WILHELM, 'The Excavations of the Austrian Institute at Lusoi'; W. DÖRPFELD, 'Investigations and Excavations on Leucas I.' March 29: H. VON PROTT, 'The Dulorestes of Pacuvius'; W. DÖRPFELD, 'Investigations and Excavations on Leucas II.' April 29: A. WILHELM, 'Topographical Investigations in the Peloponne-

SUS'; TH. WIEGAND, 'The Excavations at Priene and Miletus.' (*Athen. Mith.* XXVI, 1901, p. 120.)

The Congress of Archaeologists.—The commission for the International Congress of Archaeologists at Athens has just held its first meeting, under the presidency of the Crown Prince Constantine. A sub-committee was chosen to make arrangements for the details of the congress and the issue of special invitations, with the Cultus-Minister Stais as president, and the Director-General of Antiquities Kavvadias, Professor Homolle, the Director of the French Archaeological Institute, and Dr. Dörpfeld, the Director of the German Archaeological Institute, as members. During the time of the congress there is to be a general visit of the members to the antiquities of Athens, and it is hoped that common excursions will also be arranged to some of the most archaeologically interesting points in the Greek kingdom. The date of the congress will probably be the spring of 1903. (*Athen.* July 15, 1901.)

CHALCIS.—**Inscriptions.**—In 'Ε φ. 'Α ρ χ. 1901, pp. 89-98, GEORGIOS A. PAPABASILEIOS publishes inscriptions from Chalcis. The first is a fragmentary decree granting to some persons (names unknown) from Alabanda the same rights as to the other citizens of that town. Nos. 2-16 are simple epitaphs. Inscriptions on terra-cotta grave-monuments read ΧΑ or ΧΑΑ or ΧΑΑΚΙΔΕΩΝ. One reads ΑΘ ('Αθηναίων). On one is the name Φιλίππου, the letters arranged in a circle between the radiating petals of a conventionalized flower. Ten stamps from amphora handles give names, three of which are in the genitive with ἐπί, recording dates.

CRETE. GOURNIA.—**Miss Boyd's Discoveries.**—In the *Nation*, November 7, 1901, Miss HARRIET A. BOYD describes the discoveries which she made, in company with Miss B. E. Wheeler, at Gournia, near Kavousi. A Mycenaean acropolis was found, approached by two long streets, about 5 feet wide, with terra-cotta gutters and good stone pavements. These lead to the palace of the Prince. Right and left are side streets and houses. The steeper parts of the roads are built in steps. The houses have rubble foundations, but the upper walls are of brick. In some parts of the palace the upper walls are of ashlar. Several houses have walls standing to the height of 6 or 8 feet. Plaster is used extensively for the facing of walls and door jambs. There are many proofs of the existence of a second story. Twelve houses have been excavated, most of which have eight rooms or more. Of the palace, fourteen rooms have been excavated, chiefly magazines, like those at Cnossus. A terrace court, a column base, and an aula, evidently belonging to a portal, have been uncovered. In the centre of the town is a shrine. It is a small, rectangular building, near the top of the hill. The most noteworthy of its contents are a low terra-cotta table, with three legs, which possibly served as an altar; cultus vases with symbols of Mycenaean worship: the disk, "consecrated horns of the altar," and the double-headed axe; and a terra-cotta idol of the "Glaucopis Athene" type, with snakes as attributes. Numerous small objects of various materials were found; among them, stone basins and delicately carved vases; pottery remarkable for its various decoration, which includes all the well-known Mycenaean motives of plants, animals, and sea-shells, besides many new types; and stone and bronze utensils, among them a bronze saw 45 cm. long. On five vases the double axe is painted, and the axe is carved also

on one of the blocks of the palace, as at Cnossus and Phaestus. No trace of linear or pictographic script has been found, but Mycenaean gems of fine workmanship are numerous. This is "the most perfect example yet discovered of a small Mycenaean town." (See also D. G. HOGARTH, *London Times*, August 10; *Independent*, September 5; *Biblia*, September, pp. 181-187; S. REINACH, *Chron. d. Arts*, November 30; R. C. BOSANQUET, *J.H.S.* 1901, p. 341.)

PHAESTUS (CRETE).—**A Mycenaean Palace.**—In *Biblia*, September, 1901, pp. 181-187, D. G. HOGARTH, after mentioning the discoveries at Cnossus, describes other discoveries in Crete. At Phaestus, a palace of Mycenaean times has been discovered by Halbherr. It consists of a paved court with an altar and tiers of stone seats, a building with a pillared vestibule, a main hall, a double row of galleries, and numerous chambers, and a second court larger than the first. The construction is more solid than at Cnossus, but the frescoes, sculptured friezes, and stucco reliefs, found at Cnossus, are wanting. (A more detailed description of Phaestus is given by S. WIDE, in *Berl. Phil. W.* October 12, 1901. Cf. also *Independent*, September 5, from a letter by HOGARTH in the *London Times*, August 10.)

Work in the Spring of 1901.—In *Rend. Acc. Lincei*, 1901, fasc. 7-8, pp. 260-284 (plan), L. PERNIER makes a report of the work of the Italian expedition in Crete during the spring of 1901 (cf. *Am. J. Arch.* 1901, p. 344). It was proved that the Mycenaean necropolis of Phaestus was not on the hill northeast of the palace, but more probably on another elevation, about 2 km. west of Phaestus; the remains in the latter place, however, may indicate the existence of a town, not a necropolis. The northern and eastern parts of the third acropolis of Phaestus were cleared. Above the ruins of the Mycenaean palace the following strata were found: (1) Byzantine tombs; (2) Roman walls; (3) remains of the last period of the Greek city, especially fine pottery; of the earlier Greek city there are no important remains; (4) remains of the period intervening between the destruction of the palace and the foundation of the Greek city. A large part of the palace was excavated, and, in this article of Pernier, the complicated system of rooms, including three *μέγαρα*, is described by references to a plan. Many letters or signs were found inscribed on building materials and other objects; also many vases, including one shaped like the hut urns of Latium. A remarkable discovery was a shell having in bas-relief a procession of four creatures with human bodies and the heads of animals. The decoration of the stucco in the palace is all geometric. Traces of a neolithic settlement were found below the palace at the west.

PRAESUS (CRETE).—**British Excavations.**—At Praesus, the Eteocretan capital, in Sitia, the eastern province of Crete, few remains of Mycenaean civilization appeared. Inscriptions in a non-Hellenic (Eteocretan) language were found. Many remains of Hellenic sculpture and various kinds of vases, bronzes, and utensils were found. The head and shoulders of a statue of a young god and the head and fragmentary body of a lion give a good idea of early Cretan sculpture. Vases and jewellery were also found in tombs. (R. C. BOSANQUET, *J.H.S.* 1901, p. 340.)

ZAKRO (CRETE).—**Houses and Small Objects.**—At Zakro, a small ancient town in the extreme southeast of Crete, Mr. HOGARTH has found houses, one of twenty rooms, in which were more than seventy vases

and objects in silver, bronze, and stone, and two inscribed tablets and one hundred and fifty impressions of lost signets. They were found all together, as if they had been in a box, and the objects to which they were attached had perished. The vases had decorations in the older familiar Mycenaean style. (*Independent*, September 5, 1901, from a letter of D. G. HOGARTH, in the *London Times*, August 10. See also *Biblia*, September, 1901, pp. 181-187; S. REINACH, *Chron. d. Arts*, November 30; R. C. BOSANQUET, *J.H.S.* 1901, pp. 338 f.; G. STEINDORFF, *S. S. Times*, November 9, 1901.)

DELPHI. — **Excavations in 1901.** — In *C. R. Acad. Insc.* 1901, pp. 638-641, is a brief report by TH. HOMOLLE of the excavations at Delphi in 1901. At the place called Marmaria, the site of the temple of Athena Pronaia, a terrace more than 100 m. in length, surrounded by Hellenic and polygonal walls, was laid bare. It was entered by at least three gates, and contained six temples or chapels, two altars, and a dwelling for priests. At the eastern and western ends of the enclosure are two temples, each more than 20 m. long. One is the temple of Athena Pronaia, the other of Athena Ergane(?). One is peripteral, the other prostyle. One of tufa, the other of limestone. Both are Doric, but the second has Ionic half-columns in the pronaos. The first appears to belong to the time of the Persian Wars, the second to the fourth century B.C. Between them are a treasury, probably that of the Phocaeans, a *tholos*, and an altar, all of white marble, and all destroyed. The treasury resembles that of the Cnidians, and dates from the sixth century B.C. It was Ionic, and its sculptures show the Ionic style. The *tholos* was more perfect in execution than those of Epidaurus and Olympia. The Doric capital of the peristyle recalls that of the Parthenon. The thirty-eight metopes were adorned with scenes of the Amazonomachia and the Centauromachia admirably conceived and executed. Of these only fragments remain. The Corinthian columns of the interior are among the earliest known. Above, a small terrace was occupied by two chapels, one of which was the *heroum* of Phylacus. Remains of the metopes of the *tholos* and of another series of small metopes show heads and other fragments of sculpture which rival the reliefs from Rhamnus. Among the terra-cottas found, the Victory which stood as an acroterium upon the temple of Athena is a most beautiful work, though only fragments of it remain. Pieces of armor, griffins' heads, bronze plaques, and bronze circles, surmounted by figures of men or animals, were once parts of votive tripods. Among the inscriptions discovered are a signature of the Athenian Cephisodotus, an epigram in honor of the mathematician Callippus, an archaic dedication to Ἀθανᾶ ἑκαργάνα, decrees of proxeny in honor of some Phocaeans, and an account of the real estate farmed or rented on the account of Apollo, dated in 333 B.C.

ITHACA. — **Inscriptions.** — It is reported from Ithaca that inscribed gravestones of the fourth century B.C. and earlier have been found at the south of the island. A very old gravestone is inscribed Ἀπποδύρου; four others also contain names. An inscription of Roman date mentions an Ithacan Orons, who died far from home, and gives the name of the island clearly. (*Berl. Phil. W.* October 26, 1901.)

LEUCAS. — **Early Vases.** — At Leucas, where Professor Dörpfeld is digging at the expense of the Dutchman Goekoop, with the idea that this

spot, not the present Thiaki, is the Ithaca of Odysseus, between the villages of Vlichò and Katochori, the stratum which yielded several vases of Grecian date has underneath it, it is found, another layer which contains many vases which appear to be of Trojan style. It is hoped that buildings will now be discovered at the same spot. (*Athen.* July 20, 1901.)

PIRAEUS. — **Names of Ships.** — In 'Εφ. 'Αρχ. 1901, pp. 81–84, A. WILHELM publishes an inscription from the harbor of Munichia. It is a fragment of a list of vessels approved by a board of naval examiners. Before the name of each vessel are the words δόκιμος καὶ ἐντελής. Four names, Δανάη, Θέαμα, Παγκράτεια, and Ταυροπόλη, can be read.

THERA. — **Inscriptions.** — In *Hermes*, XXXVI, 1901, pp. 444–447, F. HILLER VON GAERTRINGEN publishes two inscriptions from Thera. The first is in honor of some one, a son of Philostratus of Raucus, in Crete, who had been admiral and general of one of the Ptolemies. The date is probably after 265 B.C. The second inscription is a very fragmentary dedication to Sarapis, Isis, and Anubis by a Myndian (whose name is lost) in behalf of Ptolemy IV and Arsinoë.

THERMUS. — **Continued Excavations.** — At Thermus, in Aetolia, Sotiriades has found an artist's inscription Λύσιππος ἐποίει, a bronze weight of 500 grammes inscribed Ἀπόλλωνος Θερμίου, and several exedras with the names of men whose statues were set up by the κοινόν of the Aetolians, besides fragments of terra-cotta cornices and antefixes and marble triglyphs belonging to the temple. The statues in the exedras (among them the one with the signature of Lysippus) were apparently of bronze. In the valley of Βάλτσα, four or five miles from Thermus, a heap of terra-cottas has been found. Remains of buildings of the third century B.C. are still standing here. Excavations at Thermus are to be continued, and later Thestieis, on Mt. Vlochos, is to be excavated. (*Berl. Phil. W.* August 17, 1901.)

ITALY

ACERENZA. — **A Portrait of the Emperor Julian.** — In *R. Arch.* XXXVIII, 1901, pp. 337–359 (3 pls.; 6 figs.), S. REINACH publishes a bust which crowns the gable of the cathedral at Acerenza. An inscription built into the church (*C.I.L.* IX, No. 417) mentions the emperor Julian, and there is no doubt that the bust of an emperor at the top of the gable represents him, as was observed by F. Lenormant in 1882. The face agrees with the descriptions and coins of Julian. That a second inscription has nothing to do with Julian is mentioned, *ibid.* XXXIX, p. 289 (cf. p. 260). It is shown that the statues in the Louvre and the Musée des Thermes, at Paris, hitherto supposed to represent Julian, are not portraits of him. The busts on the Marlborough cameo, now in the British Museum, probably represent Julian and Helen, as Wieseler thought, not, as Furtwängler believes, Zeus Ammon and Isis. A large cameo in the Cabinet des Médailles appears to be, as Babelon had conjectured, a portrait of Julian. The bust at Acerenza is, however, the best portrait of Julian known. Similar results are reached by G. NEGRI, in a volume entitled *L'imperatore Giuliano l'Apostata* (Milan, Hoepli).

ATRI. — **A Temple, Terra-cottas, and a Necropolis.** — Remains of a Roman temple of brick, with terra-cotta ornaments, have been found at Atri. There was once an abundance of votive material; but this, together

with the temple, was plundered by the barbarians, and the building then burned. The remains of the temple, together with various terra-cottas found in Atri, are described by E. BRIZIO in *Not. Scavi*, 1901, pp. 181-194 (10 figs.). About 2 km. southeast of the town a pre-Roman necropolis has been partially explored.

AUFIDENA. — The Necropolis. — In *Mon. Antichi*, X, 1901, pp. 225-638 (10 pls.; 100 cuts), L. MARIANI publishes the results of excavations at Aufidena (modern Alfedena), the most important centre in the mountains of northern Samnium. An extensive necropolis shows the pre-Roman civilization to be of Sabellian type with strong local characteristics, developing slowly from the seventh to the fourth century B.C., with hints of an earlier art. Gold, silver, and imported vases are rare, but bronze ornaments are abundant and of great beauty. In *Arch. Stor. Nap.* 1901, pp. 325-342, GIULIO DE PETRA gives a summary and, in some points, a criticism of Mariani's article. The necropolis, in which 1164 tombs have been excavated at different times, belongs to the iron age. Attention is called to the evidences of migration of the Aryan Italic race from the valley of the Po to Tarentum, and to the connection of the "Cyclopean" walls with the Pelasgians and the "Mycenaean" civilization. The later history of Aufidena and the migration of most of the inhabitants to Castel di Sangro are discussed.

BELMONTE-PICENO. — Objects found in the Necropolis. — In *Not. Scavi*, 1901, pp. 227-238 (10 figs.), S. BAGLIONI describes numerous objects found in the necropolis of Belmonte-Piceno, in the province of Ascoli. Most important are the bronzes, — *torques*, *fibulae*, bracelets, rings, amulets, and weapons. Besides these, there are vases with geometric decoration and others of *bucchero*, objects of iron, amber, etc. The necropolis belongs to the last periods of the Certosa, and its contents show that the civilization of lower Picenum is entirely different from that of upper Picenum.

CASALEONE. — Coins and Other Objects. — A hoard of 1040 republican coins, dating from the end of the second to the middle of the first century B.C., has been recently found in the territory of Casaleone. Other antiquities, especially those of a prehistoric nature, found at various times in this region, are described by G. GHIRARDINI in *Not. Scavi*, 1901, pp. 290-293.

CHIUSI. — Bronze Busts. — Two bronze busts, probably of the seventh century B.C., have been found at Chiusi. One is the earliest known representation of the god Nethuns. The other, of greatly inferior workmanship and evidently made in unskilful imitation of the first, has a woman's head, probably that of a female divinity of the sea. These busts, attached to poles, were carried in sacred processions. (L. A. MILANI, *Not. Scavi*, 1901, pp. 322-326; 6 figs.)

ESTE. — A Pre-Roman Settlement. — Walls, vase-fragments, etc., belonging to a pre-Roman settlement, have been found at Este. Most notable is a rectangular stone mould for casting, with five cavities, having the shape, respectively, of a ring, a crescent, three rings touching one another, and two birds. (G. GHIRARDINI, *Not. Scavi*, 1901, pp. 223-227; fig.; ALFONSO ALFONSI, *B. Paletn. It.* 1901, pp. 57-61; fig.) In *B. Paletn. It.* 1901, pp. 134-139 (pl.), ALFONSO ALFONSI describes several pre-Roman andirons of terra-cotta found at Este.

GELA. — **Tombs and Attic Vases.** — In *Not. Scavi*, 1901, pp. 307-311, P. ORSI gives an account of a second campaign in the territory of Gela, in the early part of 1901. One hundred and twenty-one tombs were opened, containing many good Attic vases, most of them of the fifth century B.C., several being inscribed.

GIGLIO. — **The Villa of the Ahenobarbi.** — The discovery of certain brick stamps on the island of Giglio proves that the villa of the Domitii Ahenobarbi, built in the time of the republic, was restored or enlarged toward the end of the first century after Christ. (G. PELLEGRINI, *Not. Scavi*, 1901, pp. 5-7.)

GIRGENTI. — **A Roman Necropolis.** — In February and March, 1899, a Roman necropolis was partially excavated at Girgenti, just below the Temple of Concordia. It appears to have been destroyed by the Christians who occupied the site in the fourth and fifth centuries. The tombs and their meagre contents are described by A. SALINAS in *Not. Scavi*, 1901, pp. 29-39; 2 pls.; 7 figs.

LIPARI. — **Various Antiquities.** — The following objects from the island of Lipari have been recently acquired by the Museum at Palermo: a sepulchral stele, inscribed; a cornelian, engraved with the figures of a cow and a calf; a small stone hatchet; and an archaic *quadrans*, with the head of Vulcan. (A. SALINAS, *Not. Scavi*, 1901, pp. 408-411; 4 figs.)

LUOGOSANO. — **Ancient Remains.** — In *Not. Scavi*, 1901, pp. 333-336, E. GÁBRICI describes remains of Roman period on Mt. S. Stefano, near Luogosano. These, he thinks, belonged to a *torcularium*. He describes also an ancient bridge in the same region, on the river Calore.

MENTANA. — **Inscriptions.** — Near Mentana, on a road that was probably a branch of the ancient Via Salaria, several republican tombs have come to light. All had been plundered in antiquity. The most interesting of the few remaining objects are four *tabellae devotionum* or *defixionum*. Facsimiles of these are given by L. BORSARI in *Not. Scavi*, 1901, pp. 205-210.

NAPLES. — **A Relief of Athena and Demeter.** — In *Not. Scavi*, 1901, pp. 283-285 (fig.), A. SOGLIANO describes a recent acquisition of the Naples Museum, a relief representing Athena and Demeter. It is an excellent copy of a Greek original of the fifth century.

NORBA. — **Excavations to Begin.** — It is announced that excavation is to be immediately begun at Norba. In *B. Paletn. It.* 1900, pp. 132-134, L. PIGORINI gives the general plan of the work, which will begin in the necropolis.

POMPEII. — **Excavations January to September, 1901.** — In *Not. Scavi*, 1901, A. SOGLIANO publishes reports of excavations at Pompeii. In January excavation was continued south of the Basilica and outside the north wall on the Barbatelli estate. The restoration of the Terme del Foro was still in progress (pp. 21-23, with two figures showing the restored vault of the *caldarium* and the northeast angle of the *tepidarium*). In the February number, pp. 145-170 (21 figs.), SOGLIANO describes a small house in Reg. V, Ins. IV, excavated during the summer of 1900. He gives a detailed description of the wall paintings, which are in the third style, and include pictures of the killing of Neoptolemus at Delphi, Aphrodite and Ceres, Theseus and Ariadne, Dionysus and Ariadne, Narcissus, and one splendid example of the

architectural style. The roof of the *atrium* was of the Tuscan variety and has been restored, the first attempt to do this at Pompeii. In March excavation was continued in Reg. V, Ins. IV (pp. 204-205). In April excavation continued in Reg. V, Ins. IV. A *pistrinum* was uncovered, containing mills, furnace, etc. There were numerous *graffiti* on the walls (pp. 255-262; 2 figs.). In May the street was cleared between Ins. III and IV of Reg. V, and many inscriptions were found on the walls of the houses. Excavation was resumed in Ins. III, and in the *agger* of the town wall search was made for examples of primitive local pottery (pp. 280-283). In June, excavation was continued in Reg. V, Ins. III and IV. The most important discovery was a bronze statuette of a young man, wearing the chlamys, which falls from the left shoulder across the back and over the right forearm. The figure may represent Perseus, or a young man with the attributes of Perseus (pp. 299-304; 4 figs.). In July, in Reg. V, Ins. 4^a, a small house was excavated, next to that of M. Lucretius Fronto. The excavation of Reg. V, Ins. 3^a was continued. Besides many other small objects, a bronze table was found. Its single support is the leg of a lion, resting on a square base, and ending above in an acanthus flower, out of which of springs a winged Cupid (pp. 329-333; plan; 2 figs.). In August a part of the town wall was cleared, at the left of the first tower, counting from the Porta di Ercolano. Many mason's marks were found. In Reg. VI, Ins. V, a Doric column of tufa, hitherto walled up, was exposed, and by its style of the fifth century, proves that there was an early house on this site. The excavation of Reg. V, Ins. III, was continued. Excavation was carried on also below the terrace on which rests the Greek temple, on the southeast side. Here were found many architectural fragments of terra-cotta, as well as heads and statuettes of the same material (pp. 357-363; fig.). In September work was continued in Reg. V, Ins. III, and southeast of the Greek temple. In the former place, the following objects came to light: a marble bas-relief, representing Aphrodite watching a sacrifice which is being offered to her; before the goddess are the altar, the ram for sacrifice, the *victimarius*, and six other persons, including three children; it is probably a copy of a fourth century original. On the plaster coating of a detached piece of wall, an inscription in charcoal, mentioning various articles of food. A head of a Bacchante, in *giallo antico*. Near the Greek temple, several terra-cotta statuettes, one of them an especially good work (pp. 400-406; 4 figs.).

The First Owner of the Villa of P. Fannius Sinistor. — F. BARNABEI, in *Rend. Acc. Lincei*, X, p. 72, describes a bronze seal found in the villa of P. Fannius Sinistor, near Bosco Reale, inscribed with the name of L. Herius Florius, the first owner of the villa, or one who bought it in the year 12 A.D.

Skeletons and Ornaments. — In July, 1899, an ancient country inn was discovered between the river Sarno and the Stabian gate of Pompeii. Here the skeletons of seventy or eighty persons have been found, evidently fugitives from the great eruption of 79 A.D. Some twenty of these belonged to a party of rank and wealth. Gold necklaces, bracelets, and rings were found upon their necks, arms, and fingers. One person among them seems to have been of especial importance. (R. LANCIANI, *Athen.* October 26, 1901. Cf. *Berl. Phil. W.* January 4, 1902.) [Canizzaro's suggestion that the skeleton of a distinguished person is that of Pliny the Elder hardly

deserves mention. Pliny's body was found after the eruption (Plin. *Ep.* vi, 16, 20), and was doubtless removed by his friends.]

Roman Villa Containing Rare Works of Art.—The daily papers print a report, dated London, December 22, that there has been found at Pompeii a grand Roman villa, one room of which is filled with objects of Greek and Roman art.

These include a bronze statue representing Genius with a torch in its extended right hand, the whole being of superb workmanship. There are also four of the most beautiful Etruscan vases and models of various descriptions. Seven other rooms were found to be full of cereals and other foodstuffs. Further explorations of this particular corner of Pompeii are expected to yield rich results.

PUTEOLI.—**Inscriptions.**—P. ORSI gives in *Not. Scavi*, 1901, pp. 19–20, several inscriptions of Puteoli, among them one recording a restoration of the temple of Jupiter Optimus Maximus Heliopolitanus.

ROME.—**Discoveries in the Forum.**—In the *Cl. R.* 1901, pp. 328–330, THOMAS ASHBY, JR., gives an account of recent excavations in Rome in the first half of the year. The further exploration of Sta. Maria Antiqua, the discovery of the foundations of the arch of Tiberius in front of the two southwesternmost arches of the supposed rostra of Caesar, and the finding of five pits, two of which contained pottery of Roman date, are mentioned.

GIACOMO BONI's complete report of the excavation of the precinct of Juturna in the Roman Forum is published in *Not. Scavi*, 1901, pp. 41–144 (140 figs.). After an introductory discussion of early religious rites and the nature and worship of Juturna, he describes the discoveries in minute detail,—the ramp leading to the Palatine, the shrine, well, *lucus*, and the various rooms,—with exact measurements of all architectural remains and abundantly illustrated description of all statues and sculptured fragments, vases, brick-stamps, lamps, etc.

The Volcanal.—In *Athen.* December 21, 1901, R. LANCIANI, in his "Notes from Rome," gives a brief history of the *Volcanal* or *Area Volcani*. On a rocky ledge commanding the Comitium, at the foot of the steps of the Temple of Concord, are the remains of an altar. This was originally a natural projection of rock, roughly squared by hand. The cube measured 3.95 m. in length, 2.80 m. in breadth, and about 1.20 m. in height. This altar Lanciani believes was the altar of Vulcan.

Inscriptions.—In *Not. Scavi*, 1901, pp. 14–17, G. GATTI gives a number of inscriptions found, some on the Via Nomentana, near St. Agnese, others on the Via Salaria, near the convent of the Carmelitani.

At Sta. Maria Capua Vetere has been found an inscription of the year 360 A.D., containing two rare gentile names, Murrius and Luscidius. (G. PATRONI, *Not. Scavi*, 1901, p. 18.)

Various Discoveries.—The following discoveries in Rome are announced: Under the Piazza of S. Giovanni in Laterano, a piece of ancient pavement, brick walls, and a lead pipe bearing the name Domitia Lucilla. In the courtyard of the barracks of the *bersaglieri*, near S. Francesco a Ripa, ancient tombs. On the Via Ostiense, ancient tombs and four sepulchral inscriptions. (G. GATTI, *Not. Scavi*, 1901, pp. 200–203.) In the Via Merulana, a piece of pavement of an ancient street, leading to the Porta Esquilina. Between Via Lucullo and Via Sallustiana, on the property of

the Sisters of St. Giuseppe, a headless statue of archaic type, which is attributed to the fifth century B.C. In the Baths of Caracalla, several fragmentary pieces of sculpture, including a head of Aesculapius, of a new type, a good copy of a bronze original of the fifth century, and another head of doubtful sex, from a good Greek original of the early fourth century. On the Via Ostiense, near the railroad bridge, ancient tombs. On the Corso d' Italia and on the Via Tiburtina, sepulchral inscriptions. (L. SAVIGNONI and G. GATTI, *Not. Scavi*, 1901, pp. 247-255; 3 figs.) In the Via della Polveriera, an ancient *tavola lusoria* in marble. In the garden of the Palazzo Rospigliosi, ancient brick walls and architectural fragments. In Via Veneto, near the Palazzo Balestra, a wall of *opus reticulatum*. In Sta. Maria Antiqua, in the Forum, an early Christian sarcophagus, decorated as follows: A group of fishermen, suggesting the preaching of the Faith; the baptism of Christ, a symbol of regeneration; the rescue of Jonah from the whale, indicating the new life after death; and, finally, the Good Shepherd, as a symbol of the joy of Heaven. (O. MARUCCI, *Not. Scavi*, 1901, pp. 271-278; fig.) Tombs and sepulchral inscriptions have been found on the Via Nomentana and the Via Salaria. (*Not. Scavi*, 1901, p. 279.) In the Rospigliosi garden, a piece of ancient pavement, belonging to a street running north and south; brick walls, and floors of *opus signinum*; a lead pipe, inscribed. In the gallery under the Quirinal, sculptured fragments, among them a small head of a fawn, the head of a bearded man, the head of a youthful athlete, a headless female statue. On the Via Ostiense, near the railroad bridge, two sepulchral inscriptions. (G. GATTI, *Not. Scavi*, 1901, pp. 294-297.) In Via S. Gregorio, a piece of ancient pavement. In the area included by Via Sallustiana, Via Piemonte, and Via Lucullo, ancient brick walls, and a brick drain covered with tiles. In the Rospigliosi garden, a tufa wall and others of brick. In the passage under the Quirinal, a headless statue of Faunus. Under the Lungotevere Cenci, a very ancient tufa drain, in construction like those of the Forum. In various parts of the city, sepulchral inscriptions, complete or fragmentary. (G. GATTI and G. TOMASSETTI, *Not. Scavi*, 1901, pp. 326-328.) In the Rospigliosi garden, a part of the *nymphaeum* of a private house, decorated with mosaic. In the passage under the Quirinal, a room, with mosaic pavement. In the Velabrum, near the Arch of Janus, three rooms, with walls of *opus reticulatum*. Under the Piazza della Bocca della Verità, an ancient paved road. In the courtyard of the house, No. 38, Via della Lungaretta, a pedestal with the inscription, *C.I.L.* VI, 671. (G. GATTI, *Not. Scavi*, 1901, pp. 352-356; fig.) Near S. Pietro in Vincoli, a room of an ancient house, still retaining a part of its painted walls and the mosaic floor. In the Rospigliosi garden, a room of a private house, having on one of its walls a painting in the architectural style. In Via Torino, in the area of the ancient monastery of S. Bernado, the pavement of an ancient street, walls, a drain, etc. In Via di S. Teodoro, opposite the entrance to the Palatine, the pavement of the *Vicus Tuscus*. In the Piazza della Bocca della Verità, a drain built of tufa blocks. At Ripagrande, a wall built of large tufa blocks. On the Via Nomentana, at the Villa Patrizi, a small marble bust of a child. (G. GATTI, *Not. Scavi*, 1901, pp. 397-400; 2 figs.)

The Barracco Museum.—Baron Giovanni Barracco has just made a present to the city of Rome of his museum of ancient marbles, which con-

tains specimens of the best productions of Egyptian, Greek, and Roman-Greek plastic art, on condition that it shall not be merged in the great Capitoline collections of statuary, but shall retain its own individuality. The Town Council has accepted the gift, and has set apart for the building of the new museum a plot of ground at the junction of the Corso Vittorio Emmanuele and the Via de' Banchi. The ground is archaeologically interesting, as it extends over the remains of the *schola* or residence of the Quindecimviri Sacris Faciundis, the walls of which were inscribed with the official reports of the celebration of the Ludi Saeculares. (R. LANCIANI, *Athen.* July 27, 1901.)

The Museo Ludovisi.—The Italian Parliament has sanctioned the acquisition of the Museo Ludovisi. It will be rearranged, and opened to the public as an annex to the Museo Nazionale in the Baths of Diocletian, to be built from the designs of Signor Calderini. (R. LANCIANI, *Athen.* July 27, 1901.)

The Borghese Museum and Gallery.—The Italian House of Representatives has sanctioned the purchase of the Borghese museum and gallery of pictures for 3,500,000 lire; also the purchase of the villa for 3,000,000 lire. The museum and gallery will remain the property of the nation, and while their individuality, as the former Borghese collections, will be respected, it is probable that the Ludovisi marbles, those of the National Museum at the Baths of Diocletian, and the Corsini gallery of pictures will be removed to the villa and exhibited under the same roof, although in independent wings. (LANCIANI, *Athen.* December 21, 1901.)

SAN GIMIGNANO.—**Etruscan Tombs.**—At San Gimignano, Etruscan tombs have been discovered, all of the third or second century B.C., except one, which, on account of vase fragments, must be referred to the first part of the fifth century B.C. (G. PELLEGRINI, *Not. Scavi*, 1901, pp. 7-10.)

SAN VITTORINO.—**The Via Salaria.**—The pavement of the ancient Via Salaria has been found at San Vittorino, near Pizzoli, proving that the road ran in a straight line from Foruli to Amiternum. (N. PERSICHETTI, *Not. Scavi*, 1901, pp. 23-24.)

SARDINIA.—**Excavations and Discoveries.**—In *Not. Scavi*, 1901, pp. 365-389 (16 figs.), G. PATRONI makes his first report as Director of Excavations and head of the recently established archaeological commission for Sardinia. In May and June, 1901, excavation was carried on at **Nora**, with the following results. On the isthmus connecting the peninsula with the mainland, Roman walls were found, among them the foundation of what may have been an amphitheatre. Here was also a necropolis of the Roman period. Forty-two tombs were opened, containing amphorae and coins, the latter showing that the necropolis was in use from the second half of the second century to the second half of the third century after Christ. In the midst of the graves was the foundation of a small square structure of earlier date.—On the promontory were found remains of a tower of Punic, possibly of Phoenician period, as shown by pre-Roman vase fragments of the fourth century B.C. There were remains also of two other towers, of Roman period.—The prehistoric cave of St. Bartolomeo near **Cagliari** was thoroughly cleared for the first time, and the chronology of Orsoni, who excavated in 1878, was proved to be unsound. The vase fragments were of the

neolithic and eneolithic periods. This material is at least as early as the similar pottery of Italy and Sicily, possibly earlier.

In *Not. Scavi*, 1901, pp. 286-287, F. NISSARDI describes several tombs in the neighborhood of **Bitti** (**Sassari**), Sardinia.

ORISTANO (Sardinia). — **A Punic Inscription.** — In *C. R. Acad. Insc.* 1901, pp. 576-579, P. BERGER gives text and translation of an inscription on marble now at Oristano, near Cagliari, said to have been found in the oldest parts of the necropolis of Tharros. The first part contains the names and titles of the deity (Baal-Tsor, "Master of Tyre," i.e. Melqart), to whom a building is dedicated, followed by a detailed list of its various parts; the second part is a list of magistrates. The name *Araphet* seems to be that of Arapha, a place not far from Tyre, which is mentioned in the Greek inscription from Pozzuoli (*Am. J. Arch.* 1901, p. 473). The date is given by the names of the suffetes of Tharros and also by those of the Carthaginian suffetes. In the sixth or seventh century B.C., Tharros was evidently connected by religious ties with Phoenicia and politically with Carthage.

SICILY. — **Various Discoveries.** — In *Not. Scavi*, 1901, pp. 336-349 (4 figs.), P. ORSI reports the following discoveries in Sicily: At **Syracuse**, in the district of Zappalà, fourteen tombs have been excavated, containing broken vases, coins, etc., which confirm the theory that the necropolis, coming into existence in the fourth century, reached its greatest extent in the third century, and then, being abandoned for a time, came into use again at the end of the republican period. In the Via Venti Settembre, two statues have been found. The first represents Hades, standing, with Cerberus at his side. It is of Parian marble, showing distinct traces of color. It is a Greek work, dating from the second or, possibly, the third century B.C. The other is a headless statue of Hygieia, holding a serpent. It is either an original of the fourth century B.C., or a direct copy of an original of that period. Both are probably from the precinct of Apollo, near which they were found. The catacombs of Sta. Maria di Gesù have been partially cleared. — At **Pantalica**, near **Sortino**, 227 tombs have been opened, containing many broken vases, fibulae, rings, etc. These tombs are of the second and third periods. — Many tombs have been opened at **Caltagirone**. They date from the first half of the fifth century B.C. — Other tombs of the third century B.C. have been explored at **Mineo**. — At **Centuripe**, some years ago, a lead coffin was found, containing the skeleton of a boy, and, at his head, a terra-cotta bust of Artemis. The bones have been examined, and it is generally agreed that the boy was a sufferer from rickets.

TERNI. — The following discoveries are reported from Terni: tombs of the pre-Roman necropolis that was first explored in 1886; in an upper stratum, a group of Christian tombs; within the town, pieces of Roman pavement, fragments of sculpture, etc. (*L. LANZI, Not. Scavi*, March, 1901, pp. 176-181; fig.)

TIMMARI. — **A Town and Necropolis.** — In a letter to L. Pigorini, published in *B. Paletn. It.* 1901, pp. 27-41 (pl., 3 figs.), DOMENICO RIDOLA announces the discovery of a town and necropolis at Timmari, near Matera. The settlement dates from the end of the bronze age and the beginning of the iron age.

TURIN.—**Sculptures.**—At Turin, a bronze head of Augustus has been found, a little larger than life, of great beauty and fine workmanship; also, a marble torso of a winged Cupid. (E. FERRERO, *Not. Scavi*, 1901, pp. 391–397; 4 figs.)

VETULONIA.—**Excavations and their Results.**—GIOVANNI PINZA, in *B. Paletn. It.* 1901, pp. 164–192 (pl.; 16 figs.), gives the results of excavations at Vetulonia, during the years 1896–1900. The article is in large part a list of small objects found in the tombs. The writer reaches the general conclusion that wall-tombs, trench-tombs, and chamber-tombs are practically contemporary.

VARIOUS MINOR DISCOVERIES.—In *Not. Scavi*, 1901, pp. 25–29 (3 figs.), G. PATRONI describes the following antiquities: At **Viggiano (Potenza)**, a mosaic floor and other remains of buildings. At **Pietrapola (Cosenza)**, remains of an ancient road, wall, and gate. (Cf. *Not. Scavi*, 1900, p. 606.) At **Cirò (Catanzaro)**, a *heroum* of the third century B.C.

Other minor discoveries are reported by several writers in *Not. Scavi*, 1901.

A mosaic representing a hunting scene has been found at **Baia**, near the so-called *Stufe di Nerone*. At **Soccavo**, near Naples, a fragment of a marble candelabrum has been found, with a dedicatory inscription in Greek. (pp. 297–299.) Several tombs and many objects—vases, bronzes, etc.—have been found at various times in towns of the **Basilicata** (pp. 262–270; 9 figs.). Traces of a primitive necropolis similar to those of Este have been found at **Bertipaglia** (pp. 171–174; 6 figs.). Six fragmentary inscriptions from the Roman necropolis have been found near **Brindisi** (pp. 306–307). Architectural fragments, Roman tombs, and sepulchral inscriptions have been discovered at **Fossa (Aveia)**, in the country of the Vestini (pp. 304–306). A marble head of Bacchus has been found at **Fossombrone** (p. 175; fig.). A republican inscription from the temple of Castor and Pollux at Tusculum has been found at **Frascati** (p. 280.) Tombs, a bronze helmet, and various terra-cotta objects have been discovered at **Guglionesi** (pp. 24–25; fig.). An inscription recently found at **Sorrento** records the restoration of a sundial, which had been overthrown by an earthquake, by the Emperor Titus, in the year 80 (pp. 363–364). At **Sulmona**, near the church of S. Francesco la Scarpa, remains of a large building, possibly a temple, have come to light. Under the Corso Ovidio an ancient paved road has been found (p. 365). Recent excavations at **Veio**, in the territory of **Formello**, in the necropolis formally excavated by Canina and Campana, have brought to light neither facts nor objects of importance (pp. 238–246; 10 figs.). Tombs and remains of a Roman building have come to light near **Ventimiglia**. The latter served as a foundation for the church of S. Stefano, which was destroyed in the sixteenth century (pp. 289–290).

FRANCE

GRÉZAN (GARD).—**A Greco-Celtic Statue.**—In *C. R. Acad. Ins.* 1901, pp. 280–281 (pl.), a statue found at Grézan, near Nîmes, and now in the museum at Nîmes, is published with remarks by S. REINACH. Only the upper half is preserved. The style is rude. The head is covered with a clumsy headdress which extends to the shoulders. About the neck is a *torques*. The breast is covered with ornaments in imitation of metal, upon which are geometrical designs. The figure, like some Etruscan works,

shows Ionic Greek influence. It belongs to Greco-Celtic art as the sculptures of Cerro de los Santos and Elche belong to Greco-Iberian art.

MEAUX.—**Two Roman Bronzes.**—In the *Revue des Études Anciennes*, III, 1901, pp. 223-224 (2 figs.), GEORGES GASSIES publishes (1) a small bronze statuette representing Mercury, nude, with wings springing from his head, holding a purse in his hand, and (2) a bronze head of Mercury with a winged cap. Both were found at Meaux.

Gallo-Roman Reliefs.—In the *Revue des Études Anciennes*, 1901, pp. 344-348 (5 figs.), GEORGES GASSIES publishes four rude reliefs on the four sides of an altar or pedestal found at Meaux. One represents Mars in the costume of a Roman soldier, a second Hercules (or rather the Gallic deity identified with Hercules), nude and brandishing a club, the two others draped figures, apparently female, perhaps deities, perhaps the dedicators of the monument. Another relief of the nude Hercules brandishing his club is published. It was found in the same wall where the other monument was found.

NÉRAC.—**Bust of Minerva.**—In the *Revue des Études Anciennes*, 1901, p. 348 (2 figs.), C. JULIAN publishes a small bronze head of Minerva wearing a high-plumed helmet. The work is rude. The head was found at Nérac and is now in the Azam collection at Bordeaux.

PARIS.—**Acquisitions of the Louvre in 1900.**—The additions to the department of Greek and Roman Antiquities include nothing of exceptional importance. There are marble and stone sculptures and inscriptions, forty-four numbers from Africa, Asia, Macedonia, etc.; bronze, twenty-four numbers, including the river Orontes, the lower part of a group representing the Tyche of Antioch after Eutychides of Sicyon; objects in gold and silver, eight numbers, from Russia, Asia Minor, and Syria; glass, twenty-six numbers from Egypt and Syria. Among miscellaneous articles are some memorial ampullae and an ivory book-cover of Christian times, steatite moulds for parts of bronzes from Syria and others for jewellery from Egypt, an archaic female head in lead from Greece, and two frescoes from Boscoreale. (*Arch. Anz.* 1901, pp. 150-155.)

RUGLES (EURE).—**A New Oculist's Seal.**—In *B. Arch. C. T.* July 1901, pp. vi-vii, HÉRON DE VILLEFOSSE publishes the text of an oculist's seal found at Rugles. It reads, on the four sides; (1) *Collyrium fos post impet(um)*; (2) *Diapsicorum delacrimator(ium)*; (3) *Dicentetum post imp(e-tum)*; (4) *Diedaeum len(e) ad siccum lipp(itudinem)*.

TRINQUETAILLE.—**A Mosaic.**—At Trinquetaille, at the mouth of the Rhone, the French archaeologist M. MORA has discovered a finely preserved mosaic under the ruins of an ancient Roman villa. It represents Europa and Jupiter as a bull, and is remarkable for the anatomical precision of the figures. It is to be placed in the museum at Arles. (*Athen.* August 31, 1901.)

GERMANY

THE BOUNDARY COMMISSION.—The work of the Limeskommission for 1900 has been to fill out gaps in the known course of the *limes*, to gather more details bearing on the history of special portions, and to study the influence of pre-Roman roads on the plan of the entire system. The only considerable break likely to remain in either the older or the later line is about 3 km. of the Odenwald line adjoining the left bank of the

Main. The transition to the new system, with strong stockade fence and stone towers, and often, but not everywhere, a change of route, seems to have begun under Hadrian. The long straight stretch in Württemberg is wholly of this second period. Ulm appears not to have been a Roman settlement, at least not at the time of the establishment of the *limes*. It is clear that the Romans used in many instances, and in the Rhine section exclusively, the earth roads which they found, rebuilding them with stone only within their settlements or at other special points, and laying out new roads with reference to them. Larger forts were placed where the boundary crossed preëxisting roads. An important extension of the work of the commission would be the study of the German road-system outside the province, as far as the Elbe. (E. FABRICIUS, F. HETTNER, O. V. SARWEY, *Arch. Anz.* 1901, pp. 81-92.)

THE COMMISSION FOR THE STUDY OF ROMAN GERMANY.

—The statutes of the Commission for the Study of Roman Germany, the new branch of the German Archaeological Institute, are published in *Arch. Anz.* 1901, pp. 169-170. The final decision of most of the larger matters of its organization and work rests with the Imperial Chancellor.

REPORTS FROM THE PROVINCE OF THE RHINE.—The late Roman wall of **Andernach** has been excavated. A preliminary statement of the results is given by HANS LEHNER in *Jb. V. Alt. Rh.* 1900, pp. 173-175. The same writer reports (*ibid.* pp. 175-185) the following discoveries: At **Rheinbrohl**, the beginning of the Roman *limes* and a *castellum*; at **Remagen**, a considerable piece of the Roman circuit wall; at **Bonn**, an inscribed fragment of an altar to Jupiter and two Roman potter's ovens; at **Düren**, a Roman farm or villa, which has been partially excavated.

Ibid. 107 (1901), pp. 203-245 (1 pl., 24 figs.), HANS LEHNER gives an account of the excavations and finds of antiquities at a considerable number of places along the Rhine, from July 16, 1900, to July 31, 1901. *Ibid.* 106 (1901), pp. 119-260, with many plates and woodcuts, are published the usual reports of the great activity of the provincial commission for the care of monuments in the province of the Rhine, of the antiquarian and historical society of the same region, and of the additions recently made to the various museums of the district.

ALTENBURG.—**The Lindenau Collection.**—The vases of the Lindenau collection in the Altenburg Museum, some three hundred and fifty pieces, have been newly arranged and labelled for the use of the public by A. SCHNEIDER. A new catalogue has not yet been printed, but a list with dimensions, etc., is available, and a recent book by A. PROCKSCH on the founder gives descriptions. (*Arch. Anz.* 1901, p. 171.)

ANDERNACH.—**Graves and their Contents.**—In *Jb. V. Alt. Rh.* 1900, pp. 103-128 (7 pls.), CONSTANTIN KOENEN catalogues the graves and their contents excavated in a cemetery at Andernach, which appears to have been in use from the time of Charlemagne to the year 881.

BONN.—**The Roman Town.**—R. SCHULTZE (in *Jb. V. Alt. Rh.* 106 (1901), pp. 91-104; plans and 1 pl.) describes the extent, and somewhat the character of the buildings, of the Roman town on the site of Bonn.

COBLENZ-NEUENDORF.—**An Augustan Necropolis.**—A. GÜNTHER describes, with admirable care and precision, and drawings of the objects found, the situation and contents of seventeen graves of the early

empire found in 1898 in Coblenz-Neuendorf. (*Jb. V. Alt. Rh.* 107 (1901), pp. 73-94; cuts.)

HALTERN. — **The Roman Fort Aliso.** — The excavation of the Roman Aliso has been continued. It was 1700 m. in circuit, and was built into an earlier fortification about 200 m. larger. The smaller fort was stronger and better provided with dwellings for the garrison than the earlier one. It also furnishes at least ten times as many interesting single finds. These are very numerous, and include fragments of terra-cotta vases, glassware, coins, silver-plated clasps and pins, weapons, arrow-heads, tools, keys, etc. The earlier fort is to be regarded as the work of Drusus, the son of Augustus, in 11 B.C. (*Berl. Phil. W.* January 4, 1902, from LEHNER's report in *N. D. Alt.*)

NEUSS. — **The Roman Camp.** — The excavation of the Roman camp at Neuss is finished. Several buildings were found, and numerous objects of interest came to light. The excavation of the late Roman fortification near Andernach and of the Roman villa near Blankenheim is also completed. (*Berl. Phil. W.* January 4, 1902, from LEHNER's report in *N. D. Alt.*)

NIEDERBIEBER. — **Roman Coins.** — E. RITTERLING describes at length two recent finds at Niederbieber, one (September 3, 1900) of 192 *antoniniani* from Caracalla to Valerian, and the other (September 27, 1900) of 88 *denarii* and 301 *antoniniani*, from Albinus to Valerian II, of which the latest were almost in mint state. (*Jb. V. Alt. Rh.* 107 (1901), pp. 95-131.)

REMAGEN. — **New Governor of Germany.** — A (fragmentary) inscription shows a certain Claudius Agrippa to have been governor of Germany at some unknown time, in the second or third century after Christ. (H. LEHNER in *Jb. V. Alt. Rh.* 106 (1901), pp. 105-108.)

RODENBACH. — **Relics of the Late Bronze Age.** — At Rodenbach, near Neuwied, in 1896, was uncovered a small, flattish vase of earthenware, with simple linear decorations, containing fragments of bone and a few bronze ornaments, — chain, torque, pin, fibula (of unusual type), etc., — evidently belonging to the later bronze age (1000-800 B.C.). They are described by B. von TOLL in *Jb. V. Alt. Rh.* 106 (1901), pp. 73-77 (1 pl.).

ST. GOAR. — **A pre-Roman Cippus.** — CONST. KOENEN describes, in the *Jb. V. Alt. Rh.* 106 (1901), pp. 78-90 (with figs. and 1 pl.), a curiously sculptured, short, quadrangular obelisk, of red sandstone, now standing in St. Goar, at the corner of the churchyard between the Rheinfels and Bismarckweg. He believes it to be of pre-Roman origin, to show a barbarian adaptation of Greek and Oriental motives, and to be a monument of a native fire-worship, but reserves conclusive discussion of the last point.

URMITZ. — **A Prehistoric Fort.** — A new fort has been discovered near Urmitz which is earlier than the fort of Drusus, but later than the great fortification of earth. This great fortification belongs apparently to the "Pfahlbauzeit," or later stone age. (*Berl. Phil. W.* January 4, 1902, from LEHNER's report in the *N. D. Alt.*)

WÜRSELEN. — **Roman Coins.** — HERR STEDTFELD, in *Jb. V. Alt. Rh.* 106 (1901), pp. 112-116, describes and catalogues a find of thirty-two *solidi* of the last half of the fourth century after Christ, made at Würselen (near Aachen) in the spring of 1900.

AUSTRIA

VIENNA.—A New Museum.—The numerous Roman remains found in Vienna at various times are to be collected in a special museum. The committee in charge has now, at least provisionally, established a Museum Vindobonense, in a school building on the Rainerstrasse, where a good-sized room is already filled with bronzes, terra-cottas, and iron utensils, while the second room is a "lapidarium," containing, among other things, a sepulchral monument of the first Christian century, the oldest historical find made in the city of Vienna. The establishment of the museum has given a new impetus to research in this line, as is evidenced by numerous additions recently made. The museum is to be opened to the public during the present month. (*Nation*, October 10, 1901.)

Sculptures from Ephesus.—The most important pieces of sculpture from the Austrian excavations at Ephesus are now on exhibition in the "Temple of Theseus" in the Volksgarten at Vienna, and an illustrated catalogue has been prepared. The principal piece is a life-size bronze statue of an athlete, with strigil, reconstructed from more than two hundred fragments. (*Arch. Anz.* 1901, p. 148 (cut); *Berl. Phil. W.* December 7, 1901).

GREAT BRITAIN

CHATSWORTH HOUSE.—Ancient Sculptures.—The ancient marbles in the Duke of Devonshire's possession are published from photographs, with comments, by A. FURTWÄNGLER in *J.H.S.* XXI, 1901, pp. 209-227 (10 pls.; 10 figs.). The most important piece in the collection, an original Greek bronze head of about 460 B.C., was published in the same writer's *Intermezzi* in 1896. The marbles are:

(1) A very beautiful herm, copied, with the addition of shoulder-curls, from a statue of a god, of the school of Myron and Phidias, of about 450 B.C. No replica is known, but the Cassel Apollo is a similar type.

(2) A mediocre copy of the Doryphorus of Polyclitus.

(3) An idealized head of Alexander, of a new and very fine type, with an extraordinary wealth of curls about the face. From an Attic original of the fourth century, perhaps by Leochares.

(4) A head of Hermes as god of the palaestra, with swollen ears, deep-set eyes, and two wings in his closely cropped hair. From a fourth century original.

(5) Head of Dionysus, ivy-crowned, from the same Praxitelean original as two statues of the leaning Dionysus.

(6) Small statue of Apollo standing at ease with legs crossed; a modification of a Praxitelean type.

(7) Boy's head, of unfamiliar type, from a fourth century original.

(8 and 9) Two most interesting examples of Gallo-Roman portraiture, showing Greek influence, found in Provence, and known from drawings published in 1724. (8) A male figure, a modification of the partly draped imperial type, with a head not belonging to the statue in which distinctly Roman portrait features are combined with the hair-type of the deified Alexander; good work of the early Empire. (9) A woman seated, a very rare type in Roman portraiture, with her daughter standing beside her; coiffure of the Flavian epoch.

(10 and 11) Two excellent female portrait busts, of the time of Trajan and of the early third century.

(12 and 13) Two heads of Faustina the Elder.

(14) Half-length figure of a man; characteristic of the third century after Christ.

(15) Grave relief of Herennia Syrisca and her son, with heroizing emblems and inscription. From Macedonia; first century B.C.

(16) Fragment of relief with the rare head of Juno Sospita, covered with the goat-skin; Augustan.

(17) Fore parts of the horses from a relief of a quadriga; first century B.C.

INCHTUTHILL. — Roman Remains. — In *Athen.* September 7, 1901, F. HAVERFIELD describes the Roman remains at Inchtuthill, about 10 miles north of Perth. The Roman encampment is a rectangle of some 45 acres, with a still visible earthen rampart and ditch. An ancient road approaches it. Roman pottery, remains of buildings, — including a bath-house, — and one coin came to light. Other Roman sites in Scotland are mentioned. The camp at Inchtuthill may be connected with Agricola's campaigns, but its date is uncertain.

LONDON. — Acquisitions of the British Museum in 1899. — *Prehistoric, British, and Teutonic.* Stone implements and weapons from England, Ireland, Russia, the Dardanelles, Egypt, and the Libyan Desert; a gold collar from Portugal, the finest relic of the bronze age found in that country; two groups of gold jewellery from Wales, one of them dated at 300 A.D.; various bronze objects of Anglo-Saxon times, including a jug similar to those in Frankish graves on the Rhine; Visigothic inscribed bronzes from Spain, and gold ornaments from Hungary; a Frankish brooch; Viking ornaments from Tromsø, Norway. (C. H. READ, *Arch. Anz.* 1901, pp. 160-161.)

Department of Egyptian and Assyrian Antiquities. Egyptian: By purchase, forty-seven numbers, from all periods, including partly mummified bodies of the fair-skinned pre-dynastic inhabitants of Upper Egypt, terracotta models of houses of early dynasties, stelae, statues, stone vases, wooden figures, gold and other rings, miscellaneous bronze objects, and a valuable collection of scarabs covering three thousand years. By gift, chiefly miscellaneous objects, many with inscriptions, from the graves of the earliest kings at Abydos, from the Egypt Exploration Fund.

Assyrian: More than thirteen hundred tablets from Lower Babylonia, — including documents and contracts from the time of the kings of Ur and Babylon between 2500 and 2000 B.C., and others from the reigns of Cambyzes and Darius the Great, — and fourteen numbers of miscellaneous articles, including inscriptions from about 4500 B.C. and 2500 B.C., a bronze figure, stone carvings, and engraved seals. (E. A. WALLIS BUDGE, *Arch. Anz.* 1901, pp. 155-157.)

Department of Greek and Roman Antiquities. By purchase, gold objects, chiefly jewellery, and part of a Mycenaean standard-weight bar, from Cyprus; silverware belonging to the Utian family, found near Como; twenty engraved gems, largely Mycenaean, Hittite, and Greek work, from Cyprus; bronze mirrors, pens, fibulae, and a statuette; lead weights from Bulgaria and Syria; terra-cotta moulds for stamped bowls, from Arezzo, and a Clazomenian sarcophagus with double-profiled sphinx; an Athenian

alabastron and two white lecythi, a red-figured crater from the end of the fifth century, an Apulian amphora (Polymestor) formerly in Naples, and other pottery from Italy, Syria, and Thera. By gift, gems from Mycenaean tombs in Melos; a slab from the façade of Agamemnon's tomb at Mycenae; vase fragments from Naucratis; Graeco-Phoenician terra-cottas from a cave in Cyprus; a cast of the inscribed pillar from the "tomb of Romulus"; fragments of pottery from First Dynasty tombs at Abydos; and Mycenaean shards from Tel-el-Amarna. (A. S. MURRAY, *Arch. Anz.* 1901, pp. 157-160.)

Coins and Medals. The 509 additions to the Greek series, and 20 to the Roman, include many new, unique, or rare specimens, and many of great beauty and perfect preservation. The oldest is, perhaps, an Aeginetan didrachm of 550-500 B.C. A coin of the Achaean League, of about 370 B.C., is nearly a century earlier than the political importance of the League. Coins of Asia Minor throw light on the position of Dioshieron, Saitta, and Tomaris in Lydia, and on the name of the river Sindros, hitherto called Senaros. Another shows that Eumenia in Phrygia was for a time called Fulvia, after Antony's first wife. Parthian coins give portraits of several kings, and help to settle the doubtful chronology of the Arsacid period. (B. V. HEAD, *Arch. Anz.* 1901, pp. 161-163.)

OXFORD. — Acquisitions of the Ashmolean Museum in 1900. —

Egyptian. From the Egypt Exploration Fund: terra-cotta seal impressions and miscellaneous objects of ivory, crystal, wood, stone, and copper from the graves of the kings of the First Dynasty, at Abydos; fragments of an early yellowish pottery with linear decoration, called Aegean by Petrie, but similar to Egyptian specimens of about 4400 B.C. already in the museum. From the Egyptian Research Account: contents of tombs of the Twelfth, Thirteenth, and Eighteenth Dynasties, — in the last, imported Cyprian ware and the earliest dated Egyptian object of iron.

Early Greek and Oriental. Marble vases, pottery, stone weapons and idols, from the Island civilization; a unique Mycenaean silver statuette; a gold Hittite button; a gold and iron dish from Malta, Phoenician work of the seventh century.

Classic Greek. Four fine vases of the fifth and fourth centuries; shards of Ionic and Attic vases of 650-400 B.C., many with dedicatory inscriptions, from the excavations at Naucratis in 1899.

Local. Coins and other small objects from a Roman and pre-Roman settlement at Woodeaton, the coins covering the first four centuries of the Empire, and including those of Carausius and Allectus. (A. J. EVANS, *Arch. Anz.* 1901, pp. 163-165.)

AFRICA

ARCHAEOLOGICAL WORK IN NORTHERN AFRICA. — In *B. Arch. C. T.* January, 1901, pp. ix-xxviii, are brief reports of topographical and archaeological investigations in Tunisia and Algeria, a description of the discoveries at Thugga (with the text of four inscriptions), and notes on recent discoveries. An inscription from Bernelle is published, consisting of a dedication to *Pluto Augustus M. Aurelius*. The titles of Marcus Aurelius are incompletely given. *Ibid.* February, pp. vi-xxi, various further discoveries are mentioned, among them that of a Roman mausoleum in the ravine of Maktar, near the Roman port of Aïn-el-Bab. The mausoleum itself is destroyed. The relief which adorned

the façade represented a sacrifice by seven persons. The inscription, of a date before Caracalla, mentions a man whose surname is *Tiprunitanus*. Other inscriptions were found in the same necropolis. *Ibid.* March, pp. vii-xiv, are further reports, including the text of seven inscriptions and the description of a series of lamps acquired by the Bardo Museum. *Ibid.* May, pp. xiv-xxxiii, further reports include the description of several rather poor sculptures, the most interesting of which is, perhaps, a statuette of black marble, representing a negro holding a dove. This was found at Sousse, and at the same spot the remains of a Roman villa came to light. In it were several mosaics, of poor workmanship. The most interesting represents the rape of Ganymede. Lamps from the necropolis of Bou-Hajar, near Lemta, and from a necropolis near Sfax, are described. *Ibid.* June, pp. iv-xiii, are brief reports from several places. Fifteen inscriptions are published, among them six milestones from Chihat, 9 km. northeast of Ngaous. *Ibid.* July, pp. viii-xx, are further reports, with the text of fifteen inscriptions. Excavations are continuing at Dougga, Carthage, and Djerba, and have begun at Bou-Ghrara (Gigtris) with the Capitulum and its peribolus. Here several dedicatory inscriptions and fragments of sculpture have been found.

CARTHAGE.—Excavations in the Necropolis of St. Monica.—

In *C. R. Acad. Insc.* 1901, pp. 583-602 (4 pls.; 20 figs.), A. L. DELATTRE gives a report of his excavations in the Punic necropolis at Carthage. (See *Am. J. Arch.* 1901, p. 114). The tombs were similar to those previously opened. The principal monuments discovered were stelae, terra-cotta figurines, bronze objects, and razors with engraved blades. Some Punic coins and inscriptions were also found. Each of the stelae published has, in a niche on the front, a relief representing the deceased. One of these niches has the form of an *aedicula*. One stele is almost a statue in the round; the person represented is a young woman, fully draped. The lower part of the person is left in the form of a somewhat rounded block, but the upper part is completely worked as a statue. A bronze statuette, only 0.045 m. high represents a man wearing a sort of shawl. A fine bronze *oenochoe* has a handle formed by two nude male figures. The razors have handles in the form of the heads and necks of geese or swans. The blades are engraved with human figures, plant forms, etc.; in Egyptian style. One blade has on one side Isis nursing Horus, and on the other the crowned hawk (symbol of Horus) standing above a lotus flower. Similar razors, not recognized as such, were previously known. (See *Am. J. Arch.* 1900, p. 272.) That they are razors is seen by comparison with razors used by African negroes. The inscriptions published are simple Punic epitaphs.

CARTHAGE.—A Punic Inscription.—In *C. R. Acad. Insc.* 1901, p. 268, the discovery of a Punic inscription in the necropolis of St. Monica is reported. The fragment consists of twenty-five lines, chiefly an enumeration of magistrates.

CARTHAGE.—A Painted Sarcophagus.—In *C. R. Acad. Insc.* 1901, pp. 272-278, Father DELATTRE describes a marble sarcophagus of Punic date found in a tomb in the necropolis of St. Monica at Carthage. It is rectangular, and had a cover in the form of a tiled roof. It is adorned with ovules, *rais de coeur*, and meanders. The cover had numerous antefixes. In the pediments are two busts of a reddish brown color, with blue wings, a sort of

spirits, each holding in his hand a disk and crescent. This is the second Punic marble sarcophagus found in this necropolis, and in its painting it is unique.

KHAMISSA.—A Keystone with a Relief and Inscription.—In *C. R. Acad. Insc.* 1901, p. 344 (pl.), the keystone of an arched doorway from the theatre of Khamissa, discovered by S. Gsell, is published. On it is a relief representing, apparently, a theatrical mask. Below it is the inscription EVNVCHVS. This may be the title of the play of Terence, and is in that case an interesting proof that the plays of the classic Roman dramatists were not forgotten in imperial times, even in a distant province.

LAMBAESIS.—The Roman Camp.—In *C. R. Acad. Insc.* 1901, pp. 626–634 (plan and pl. of inscription), R. CAGNAT reports that a large court, surrounded by porticos and chambers, has been laid bare. Two inscriptions are published, the first a dedication to Septimius Severus Caracalla, and to Julia, the wife of Severus, followed by a list of names of *custodes armorum*, the second a dedication to Minerva for the welfare of the emperor M. Aurelius Severus Alexander and Julia Mamaea, followed by a list of names of *custodes armorum*.

THUGGA.—The Theatre.—In *C. R. Acad. Insc.* 1901, pp. 269–271, is a report by Dr. CARTON on his excavations in the theatre at Thugga. The *cavea* was surmounted by a row of arcades having an inscription to L. Verus. There were twenty-six rows of seats divided by a stairway of fifty-two steps. Two upper *maeniana*, with six rows of seats, formed four *cunei*, and a lower *maenianum*, with seven rows of seats, formed two *cunei*. The semicircular orchestra was connected with the stage by two flights of steps. The floor of the scene had a mosaic laid in imitation of carpentry. The *frons scaenae* represented a colonnade, and had an inscription mentioning the foundation of the building by P. Marcus Quadratus. Three doors led out from the back of the scene, and two more were at the ends. Under the scene was a low vaulted space 1 m. high. Back of the same was a small room from which the *hyposcaenium* was reached. There were also several dressing-rooms, etc. Two stairways at the southwest corner of the scene-building gave access to the orchestra and to the stage for people coming from the city. Inscriptions found in the theatre include dedications to Ceres and to the Emperor Probus, and numerous *cursus honorum*. Two pedestals bear the name of the Pulleni, who were distinguished citizens of the place, and others record that two brothers, the Marcus Simplex, built the capitol. Their brother, Marcus Quadratus, built the theatre. Their father and another brother had statues in the theatre. Among works of sculpture found are a fine marble head of L. Verus, and hands holding the globe, and two colossal female statues.

BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART

GENERAL AND MISCELLANEOUS

A NEW JOURNAL FOR BYZANTINE ARCHAEOLOGY.—A new journal for the study of Christian archaeology in the East has been started at Rome under the editorship of Dr. A. BAUMSTARK. It will be published semi-annually under the title, *Römische Halbjahrhefte für die Kunde des christlichen Orients*.

PHOTOGRAPHIC APPARATUS FOR LIBRARIES.—In the *Centralblatt für Bibliothekswesen*, January-February, 1901, Dr. MALSDORF describes the apparatus best adapted for photographing manuscripts as developed by Dziatzko at Göttingen. The article is practically reproduced in the *Bibl. Éc. Chartes*, 1901, pp. 145-149.

FRIZZONI'S NOTES OF TRAVEL.—Followers of FRIZZONI will be interested in the 'Ricordi di un viaggio artistico oltralpe,' published by him in *L'Arte*, 1901, pp. 221-238. His travels took him to the Tyrol, Prague, Dresden, Berlin, Frankfort, Nuremberg, and Stuttgart, and his attention was occupied chiefly by the Italian paintings seen during his travels.

VURLA (ASIA MINOR).—**Basilica and Baptistry.**—At a place known as Gül-Bagtsché, near Vurla (Clazomenae), have been uncovered the foundations of an early Christian basilica and baptistry. The basilica has externally a square but internally a round apse. The plan of its atrium, narthex, diaconicon, and adjoining rooms, is well preserved. The baptistry, though square in plan, may have been covered with a dome. Fragments of mosaic pavements and some inscriptions have been found. G. WEBER, in *Byz. Z.* 1901, pp. 568-573, assigns these buildings to the seventh century.

STANO DI RAGUSA (DALMATIA).—**Discovery of an Early Christian Cemetery.**—At Stano di Ragusa (Dalmatia) have been discovered four sarcophagi and two brick tombs alongside of the communal road. All of the burials appear to belong to the fifth or sixth century. The most important is the sarcophagus of a priest Anastasius of the fifth century, not to be confused with St. Anastasius the martyr of Salona. It is inscribed *Dep(ositio) et requies s(an)c(t)i ac venera(ndi) Anastasi pr(es)-b(ite)ri d(omi)ni V Id(us) Mart(ialis), indict(ione) XV, post c(on)s(ulatum) Severini v(ice) c(larissimi)*. (*N. Bull. Arch. Crist.* 1901, pp. 195-204.)

BUDAPEST.—**Italian Paintings.**—The National Gallery at Budapest has recently acquired the following Italian paintings: a 'Holy Family,' by Palmezzano; a 'St. Jerome,' by Marco Basaiti, signed Marcus Baxaiti; a 'Pieta,' of the Paduan School; a 'Madonna Enthroned,' by Girolamo da Santa Croce; an 'Aeneas and Dido,' of the Paduan School; a 'Theseus and the Minotaur,' manner of Ercole di Roberti; a 'Christ Scourged,' signed by Pietro da Messina; a 'Madonna,' by Antonio Vivarini; a 'Madonna' by Antonio Mori da Carpi; a 'Male Portrait,' School of Moroni; a 'Male Portrait,' by Moretto da Brescia; and a 'St. Louis (?),' by J. B. Moroni. (*L'Arte*, 1901, p. 24.)

PALESTINE

JERUSALEM.—**Christian Mosaics.**—Adjoining the mosaics representing Orpheus and his followers, also two women, Theodosia and Georgia, and a hunting scene (*Am. J. Arch.* 1901, p. 366), a portion has recently been uncovered on which is represented a Greek cross. It is published by J. ANGELINI in *N. Bull. Arch. Crist.* 1901, pp. 217-219, as a Christian monument of the fifth or sixth century.

NAZARETH.—**Excavations.**—In excavating in the vicinity of the Sanctuary of the Annunciation there have been discovered remains of decorative marble, mosaics, lamps, coins, and other objects above the site of a tomb containing a well. From its locality this is supposed to be the sanctuary mentioned by Arculphus *De locis sanctis*, ch. xxvi, as the *domus in qua noster nutritus est Salvator*. (*N. Bull. Arch. Crist.* 1901, pp. 149-151.)

ITALY

FLORENCE.—The 'San Girolamo' of Andrea del Castagno.—The 'San Girolamo' of Andrea del Castagno, of which Vasari speaks so highly, is reported to have been recently discovered at Florence, on the altar of the Chapel Montaguti, in the church of S. Annunziata. The picture was hidden behind a painting of Alessandro Allori. (*Athen.* July 20, 1901.)

Recent Acquisitions of the Uffizi.—The following recent acquisitions of the Uffizi Gallery are described by Émile Jacobsen in *Gaz. B.-A.* 1901, pp. 412-424: (1) Lorenzo di Credi, 'Venus'; (2) Botticelli, 'Adoration of the Magi'; (3) School of Botticelli, 'Madonna Enthroned, with Saints'; (4) Boltraffio, 'Profile of a Young Man'; (5) Sebastiano del Piombo, 'Portrait of a Man'; (6) Paul Veronese, 'The Rescue of Moses'; (7) Tintoretto, 'Leda'; (8) Salvator Rosa, 'Job visited by His Friends'; (9) Salvator Rosa, 'Landscape'; (10) Guido Reni, 'Susanna at the Bath'; (11) Guido Reni, 'Madonna della Neve'; (12) Jan van Huysum, 'Flowers'; (13) Van Dyck, 'Portrait of the Two Brothers, Bernard and John Lennox.'

Four Hundredth Anniversary of the Birth of Benvenuto Cellini.—Benvenuto Cellini was born November 1, 1500. The commemorative exercises planned by the *Società Italiana per l'Arte Pubblica* for November, 1900, were postponed until the spring of 1901. A memorial stone was set up on his house, a bust of Cellini was erected upon the Ponte Vecchio, and interesting exhibitions of his productions were held in the Museo dell'Opera del Duomo, and in the sacristies of Santa Trinita, San Lorenzo, and Santa Maria Novella. (*L'Arte*, 1901, pp. 214-216.)

The Façade of San Lorenzo.—The façade of San Lorenzo, for which no design was left by Brunelleschi, has remained a blank wall without architectural decoration. As the result of a competition held in 1900, seven architects were selected who are to offer designs in a second competition. The designs of these architects as well as those of Giuliano da Sangallo and Michelangelo are published by J. B. SUPINO in *L'Arte*, 1901, pp. 245-262.

MILAN.—The Cathedral in the Fifteenth Century.—Notwithstanding the nine volumes of the *Annali della Fabbrica del Duomo* and all that has been published by Boito, Carotti, Beltrami, and Meyer concerning the Cathedral of Milan, FRANCESCO MALAGUZZI VALERI finds a series of unpublished documents concerning the Cathedral in the fifteenth century which he publishes in *Rep. f. K.* 1901, pp. 87-102, 230-240. The series begins with a document dated November 22, 1471, confirming the appointment of Giovanni da Solaro as engineer; other documents give historical data concerning the construction and ornamentation of the ciborium.

Acquisitions of the Archaeological Museum.—The Archaeological Museum at Milan has recently acquired a Renaissance marble female mask, a fifteenth century wooden statue of a saint, a bust having the characteristics of the work of Leone Leoni and Pompeo Leoni, a terra-cotta mantelpiece from near Cremona, and a fine collection of books and keys. (*L'Arte*, 1901, p. 140.)

Notable Italian Paintings.—The late director Giuseppe Bertini was the active agent in acquiring for the museums of Milan a number of notable Italian paintings. These embrace paintings by Bramantino, Bernardino Luini, Gaudenzio Ferrari, and Boltraffio. An account of these is given by G. FRIZZONI in *L'Arte*, 1901, pp. 93-110.

Frescoes by Leonardo in the Castle.—In 1893 the task of restoring the frescoes by Leonardo da Vinci in the 'Camera grande delle assi' of the Castle of Milan was begun. Owing to the expense involved the work has remained unfinished. Through the munificence of a lawyer, Pietro Volpi Bassani, the work will be continued under the competent direction of Luca Beltrami. (*L'Arte*, 1901, p. 139.)

NAPLES.—**French Gothic Altar in the Church of Sta. Chiara.**—The government architect, Ettore Bernich, has discovered documents, for the most part inedited, which present a clear idea of the church of Sta. Chiara as built by Robert of Anjou (1310-1340). Behind the present baroque altar he has found the original French Gothic altar and has recovered some of the statuettes with which it was adorned. (*L'Arte*, 1901, p. 295.)

REGGIO EMILIA.—**The Baptismal Font.**—The baptismal font at Reggio Emilia, had, until the beginning of the nineteenth century, a richly carved hemispherical cover. The design for this cover by Matteo della Tarsia has been found in the Episcopal Archives of Reggio Emilia, and is published by G. FERRARI in *L'Arte*, 1901, pp. 198-199.

ROMAGNA.—**Little Known Works of Art.**—G. BEDESCHI, in *L'Arte*, 1901, pp. 201-202, draws attention to some little known works of art in Romagna. At Cotignola he makes special mention of the sumptuous tomb of Fra Rinaldo Graziani († 1529) at Bagnacavalla, of four choir books with fine miniatures, an eighth century ciborium, fourteenth century frescoes, and a well-carved sepulchral slab; at Lugo, of several interesting buildings; and at Sant' Agata sul Santerno, of an imposing terra-cotta cornice which formerly adorned the old church of Sant' Agata.

ROME.—**An Ancient Baptistery.**—In the *N. Bull. Arch. Crist.* 1901, pp. 71-111, an ancient baptistry is described by O. MARUCCI. It was found in a passageway leading from a chamber excavated in the cemetery of St. Priscilla on the Via Salaria. The font or tank is 26 feet long by 10½ feet wide. About an arch inside of the tank is a Latin inscription: "If any one thirst let him come." In the *Gesta* of Pope Liberius it is stated that when he was banished from Rome (in 355 A.D.), he took up his residence three miles out, and baptized 4012 persons at Easter in the "cemetery of Ostiano, where Peter the Apostle baptized." The font just discovered is in Marucci's opinion the "*Fons Petri*" mentioned in the itineraries. DUCHESNE, in a supplementary note, thinks Marucci's conjecture is not improbable. The crypt containing the baptistry was found in 1888 by G. B. De Rossi, who recognized its importance, but it was closed and not reopened until 1900.

Bones under the Church of SS. Giovanni e Paolo.—Beneath the church of SS. Giovanni e Paolo was found, in 1887, the house of the martyrs, Giovanni and Paolo. During the past summer there has come to light below the church a pit, surrounded by brickwork to appear like a cylindrical support, in which were found the bones of at least ten persons. O. MARUCCI, in the *N. Bull. Arch. Crist.* 1901, pp. 175-176, suggests that these may be the remains of the martyrs named Scillitani, put to death under Marcus Aurelius in the year 180 A.D. Their bodies were known to have been transported to this church in the ninth century.

Graves at Sta. Agnese.—A thorough exploration of the church of Sta. Agnese in the Via Nomentana has been undertaken at the expense of Cardinal Kopp. Under the pavement of this apse two layers of tombs have

been found. The upper layer consists of brick coffins covered or lined with marble slabs. On one of these is carved a portrait of St. Peter. These tombs belong to the fourth century. The lower tier contains one or two galleries cut in the solid rock, and lined with *loculi* which have never been opened. One belongs to a Marcellinus, buried May 6, 394 A.D.; another to an Ementius, a third to a Hagnes, a fourth to a Turtura. (LANCIANI, *Athen.* December 21, 1901.)

Excavations in the Church of Sta. Maria Antiqua.—In the *N. Bull. Arch. Crist.* 1901, pp. 172–174, MARUCCHI publishes a photograph showing the most recent condition of the excavations in the Church of Sta. Maria Antiqua in the Roman Forum. The discovery of the foundations of the octagonal pulpit, mentioned in the *Liber Pontificalis* as the gift of Pope John VII, affords a new argument in favor of the identification of this church as Sta. Maria Antiqua. In the excavations of the church an important early Christian sarcophagus was discovered, which is assigned by MARUCCHI in *N. Bull. Arch. Crist.* 1901, pp. 205–216, to the fourth century. On it are represented the Baptism of Christ, the story of Jonah, the Good Shepherd, an Orans (the Church), and a seated figure (the defunct). MARUCCHI suggests that the concatenation of subjects indicated that the departed, having been baptized, would be raised from the dead and gathered with the elect into the garden of Paradise.

Discoveries at San Saba.—M. E. CANNIZZARO gives in *Not. Scavi*, 1901, pp. 10–14 (fig.), a brief account of discoveries at San Saba on the Aventine. In 1205 A.D. were erected a basilica and a convent, both surrounded by a wall. The basilica had three naves, the central one representing an earlier church of the Greek monks, who occupied this site from 600 to 1100. Each nave ended in an apse. There was a portico in front, within which was the principal entrance. There was another entrance in the left aisle. Projecting from this aisle was an oratory, which had formed part of an earlier structure. The convent consisted of a small cloister, with a second story on only one side.

Continuation of Di Rossi's Roma Sotteranea.—The great work by DI ROSSI will be continued by his pupils and published under the auspices of the Commissione di Archeologia Sacra. It will be published in fascicoli, the earliest treating of the catacomb of Domitilla, then of the catacombs of the Via Nomentana, and of the Salaria Vecchia, and of St. Hippolytus and Pretextatus, then the catacombs of Priscilla, of Peter and Marcellinus, and of Traso. (*N. Bull. Arch. Crist.* 1901, pp. 229–231.)

Recently discovered Frescoes by Pietro Cavallini.—In *L'Arte*, 1901, pp. 239–244, FEDERICO HERMANIN gives an account of the frescoes recently discovered in the church of Sta. Cecilia in Trastevere. They consist of a glorified Christ surrounded by angels, archangels, and cherubim above figures of the Virgin, the Baptist, and the Apostles. Other frescoes represent the Dream of Jacob, Esau at the bed of Isaac, St. Christopher, the Annunciation, and the Last Judgment. A comparison with the mosaics of Sta. Maria in Trastevere indicate that the frescoes were painted by Pietro Cavallini, who was associated with Arnolfo di Cambio in Rome, and with Cimabue at Assisi. The frescoes may be assigned to the years 1291–1294, and in many details anticipated and influenced the work of Giotto. He concludes that Pietro Cavallini was “veramente il novatore, il primo pittore

della nuova maniera," and promises a more fully illustrated publication of these frescoes in Vol. V of the *Galleria Nazionale*.

The Madonna del Rosario.—The Madonna del Rosario, the masterpiece of Sassoferrato, was stolen from the Church of Sta. Sabina on the Aventine in the night of July 22, 1901. It was recovered, however, some two months later. (*LANCIANI, Athen.* October 26, 1901.)

SARDINIA.—**Early Christian Monuments.**—In the *N. Bull. Arch. Crist.* 1901, pp. 61–69, GIOVANNI PINZA publishes some notes on the Christian cemetery at Bonaria near Cagliari, and on a subterranean Christian chapel near Bonorva. From the catacombs of Bonaria he reproduces an interesting fresco in which the story of Jonah and that of the Apostles as fishers of men are depicted in the same picture. The subterranean chapel appears to have been once a Roman tomb.

URBINO.—**In honor of Giovanni Santi.**—On June 2, 1901, a memorial stone was placed in the house where Giovanni Santi lived at Urbino. The inscription, written by Professor Marchigiani, reads: *Qui visse e lavorò | Giovanni Santi | Pittore eccellente e poeta | primo maestro | al figlio Raffaello.* An exhibition of fourteen of his paintings and photographs of many other paintings was held in the Ducal Palace. (*L'Arte*, 1901, p. 217.)

VENICE.—**Restoration of S. Stefano.**—The Church of S. Stefano, Venice, 1294–1325, ranked by Sansovino for its size and beauty as second only to S. Marco, is being restored. The removal of the whitewash from its walls has revealed a red and white brickwork, of animated design on the short wall and of simpler and more sober design on the long walls. Although it is now impossible to restore altogether the original character of the church, much will be done in this direction. (*L'Arte*, 1901, pp. 140–141.)

Acquisitions of the Museo Civico.—The Museo Civico of Venice has recently acquired by gift a Madonna by Bartolomeo Montagna, and another by Bartolomeo Vivarini, which once formed the central part of a polyptych. (*L'Arte*, 1901, p. 294.)

FRANCE

BAZARNES (YONNE).—**Chapel of St. Quentin.**—Until recently there existed at Bazarnes a chapel dedicated to St. Quintinus, a Roman senator of the third century. Beneath it was a spring to which invalid children were brought during the Middle Ages and in modern times. The building consecrated in 1275 by Erard de Lézinnes, Bishop of Auxerre, was erected at a much earlier date. The Abbé POULAIN suggests that excavations be undertaken with the hope of discovering pagan votive offerings near this ancient oratory. (*B. Arch. C. T.* March, 1901, p. 3.)

BEAUNE.—**Mural Paintings of the Fifteenth Century.**—In the church of Notre Dame de Beaune, in the fifteenth century chapel called Le Grand Christ, a large and fine mural painting has recently been uncovered. It represents the 'Raising of Lazarus.' HENRI CHABEUF, in the *R. Art Chrét.* 1901, pp. 508–510 attributes it to a Flemish painter and suggests the name of Pierre Spicker. It was painted for Cardinal Jean Rolin, son of the famous Chancellor Nicolas Rolin.

LYONS.—**A Lost Mosaic.**—In the apse of the church of St. Jean Baptiste at Lyons in the ninth century was a mosaic, reminding one of the well-known mosaic in St. Pudenciana, Rome. On it was represented the

city of Jerusalem. Reference is made to it by Florus, deacon of Lyons, in the following lines (Migne, *Patrol. Lat.* cxix, 259):

“Martyribus subter venerabilis emicat aula:
Martyribus supra Christus rex praesidet altus,
Circumstant miris animalia mystica formis
Nocte dieque hymnis trinum inclamantia numen.
Adestat apostolicus pariter chorus ore corusco
Cum Christus adveniet certo qui tempore iudex,
Vivaque Hierusalem agno illustrante refulgens,
Quatuor uno agitat paradisi flumina fonte.”

(*Bull. Hist. Dioc. Lyon*, 1901, pp. 276-277.)

GRANDMONT. — **The Manuscripts of the Abbaye de Grandmont.** — The abbey at Grandmont contains a number of manuscripts practically unknown, as students have usually confined their attention to the manuscripts relating to the history of the order. A list of 113 of these manuscripts is published by C. COUDERC in the *Bibl. Éc. Chartes*, 1901, pp. 362-373.

GRENOBLE. — **Acquisitions of the Museum.** — Colonel de Beylié has recently presented to the museum at Grenoble five paintings. Four are by Zurbaran and represent the ‘Annunciation,’ the ‘Nativity,’ the ‘Adoration of the Magi,’ and the ‘Circumcision.’ The fifth is by Velasquez and represents ‘St. Hernandez.’ The same gentleman has enriched the museum with gifts from India and China. (*Chron. d. Arts*, 1901, p. 200.)

PARIS. — **Acquisitions of the Louvre.** — The Louvre has recently received from Baron A. de Rothschild a fine collection of ecclesiastical goldsmith work of the thirteenth, fourteenth, fifteenth, and sixteenth centuries, consisting of reliquaries, statuettes, medallions, boxes, rings, and other objects. With the collection was also a triptych by Albrecht Dürer, and a relief of the ‘Madonna and Child’ by Desiderio. (*Chron. d. Arts*, 1901, p. 226.)

Musée de Cluny. — The Musée de Cluny has recently been enriched by fourteen objects from the Baron A. de Rothschild. Among them is a diptych by Wohlgemuth and a painting by Van Orley. (*Chron. d. Arts*, 1901, p. 227.)

Merovingian Inscriptions. — The celebrated Barberini ivory, published first by Gori in 1759 and by Molinier in 1896, has recently been acquired by the Louvre. It is described by G. SCHLUMBERGER in the *Mon. Mén. Acad. Insc.* (*Mon. Piot.*) vii, fasc. 13, pp. 79-94, and by H. OMONT in the *Journal des Savants*, 1901, pp. 101-105, and *Bibl. Éc. Chartes*, 1901, pp. 152-155. It contains a long list of names of Christians living on the Rhine and especially at Treves.

The Palaeographic Collection of Pierre Hamon. — One of the earliest French palaeographic collections was made by Pierre Hamon in 1566-1567. It is now preserved in the Bibliothèque Nationale, and is described by H. OMONT in *Bibl. Éc. Chartes*, 1901, pp. 57-73.

Archives for French Religious History. — A new publication entitled *Archives de l'Histoire Religieuse de la France* was begun in 1901. It has been entrusted to competent specialists for the publication of (1) ecclesiastical documents; (2) administrative documents; (3) judicatory documents; (4) non-Catholic documents; (5) private documents. The publication is issued from the house of A. Picard et fils, Paris.

GERMANY

BERLIN. — **A Statuette of Apollo by Michelangelo.** — In the *Jb. Preuss. Kunsts.* 1901, pp. 88-89, W. BODE publishes an unfinished statuette of Apollo, attributed by him and by ADOLF HILDEBRAND to Michelangelo. The statuette was once in the Villa Borghese, and was sold from the Villino Borghese to G. Ferroni for 25 francs. Dr. Bode purchased it from Ferroni for a moderate sum, and presented it to the Berlin Museum.

Two Fine Portraits by Van Dyck. — In the *Jb. Preuss. Kunsts.* 1901, pp. 200-206, F. LABAN publishes two fine portraits in the Berlin Gallery. They represent a Genoese senator and his wife, and once belonged to the collection of Sir Robert Peel.

COLOGNE. — **Wall-paintings from the Late Middle Ages.** — In the Haus Glesch in Cologne were discovered, in 1896, the first-known instances on the lower Rhine of the decoration of house-walls with paintings of non-sacred scenes. These are, however, of moral tendency, and are described, with wood-cut, by ANTON KISA in *Jb. V. Alt. Rh.* 107 (1901), pp. 279-285.

MUNICH. — **Exhibition of Renaissance Art.** — From June 3 to September 30, 1901, there was held at Munich an exhibition of works of Renaissance art. It consisted of Flemish, German, and Italian paintings, sculptures, tapestries, and objects in ivory, enamel, bronze, faience, etc. An account of this exhibition is given by G. FRIZZONI in *Chron. d. Arts*, 1901, pp. 260-261.

WÜRZBURG. — **Sculptures by Riemenschneider.** — Two figures, a Madonna and a St. Barbara, by Riemenschneider, the famous fifteenth century sculptor in wood, have recently been discovered at Würzburg, of which town he was at one time burgomaster. Würzburg possesses a large number of this artist's works, and the Town Council intends to devote a museum to them. (*Athen.* November 16, 1901.)

HOLLAND AND BELGIUM

AMSTERDAM. — **Acquisitions by the Royal Museum.** — In the *Rep. f. K.* 1901, pp. 167-194, E. JACOBSEN gives a description of the paintings in the Rijksmuseum which were not enumerated in the catalogue of 1898. There are here described 190 paintings of the Dutch and Flemish schools, many of which are by well-known masters.

ANTWERP. — **Discovery of Frescoes.** — In a house formerly belonging to a patrician family at Antwerp, now being arranged as a dispensary for the Sisters of St. Vincent de Paul, has been discovered an interesting series of mural paintings of the late fifteenth or early sixteenth century. They represent Sibyls. (*R. Art Chrét.* 1901, pp. 541-542.)

MONS. — **GHENT.** — **Mediaeval Flemish Sculptures.** — At Mons, in the church of S. Wandru, is a statue of the archangel Michael, which was long concealed in the crypt. It is similar in type to the S. Michael in the painting of the 'Last Judgment,' by Roger van der Weyden, in the same church. At Ghent there has recently been discovered a ceiling beam of the thirteenth century, on which are sculptured heads of poetic character and graceful execution. (*Chron. d. Arts*, 1901, pp. 282-283.)

CARE OF MONUMENTS IN BELGIUM. — The *Bulletin de la Commission Royale d'Art et d'Archéologie*, Vol. XXXIX, Nos. 9-10, contains a

report of the General Secretary, M. Massaux, and the reports from the various provinces, which show considerable activity in behalf of the preservation of mediaeval buildings, whether ecclesiastical, civic, or domestic.

GREAT BRITAIN

LONDON. — **British Museum Exhibition of Drawings.** — Among the acquisitions of recent years, now on exhibition in the Department of Engravings in the British Museum, are a fine drawing of a Pietà by Michelangelo, a grotesque head by Leonardo, three saints by Paul Veronese, and others by Tintoretto and Andrea del Sarto. (*L'Arte*, 1901, p. 292.)

THE BRITISH ARCHAEOLOGICAL ASSOCIATION AT NEWCASTLE-ON-TYNE. — The fifty-eighth annual congress of the Association was held at Newcastle-on-Tyne, July 18-26, 1901. Addresses were delivered, and sites of historical and archaeological interest were visited. An account of the congress is given in *Athen*. July 27, August 3 and 10, 1901.

THE ROYAL ARCHAEOLOGICAL INSTITUTE AT NOTTINGHAM. — The Institute held its fifty-ninth annual meeting at Nottingham, July 23-31, 1901. An account of the addresses delivered, and of the visits to sites of archaeological interest in and near Nottingham, is contained in *Athen*. August 3 and 10, 1901.

ABBREVIATIONS

Abh.: Abhandlungen. *Acad.*: Academy (of London). *Am. Ant.*: American Antiquarian. *Am. J. Arch.*: American Journal of Archaeology. *Ami d. Mon.*: Ami des Monuments. *Ann. d. Ist.*: Annali dell' Istituto. *Anz. Schw.*: Anzeiger für Schweizerische Altertumskunde. *Arch. Ael.*: Archaeologia Aeliana. *Arch.-Ep. Mitth.*: Archäol.-epigraph. Mittheil. (Vienna). *Arch. Anz.*: Archäologischer Anzeiger. *Arch. Portug.*: O Archeologo Português. *Arch. Rec.*: Architectural Record. *Arch. Hess. Ges.*: Archiv für Hessische Geschichte und Altertumskunde. *Arch. Rel.*: Archiv für Religionswissenschaft. *Arch. d. Miss.*: Archives de Missions Scientifiques et Littéraires. *Arch. Stor. d. Art.*: Archivio Storico dell' Arte. *Arch. Stor. Lomb.*: Archivio storico lombardo. *Arch. Stor. Nap.*: Archivio Storico Provincie Napolitane. *Arch. Stor. Patr.*: Archivio della r. società romana di storia patria. *Athen.*: Athenaeum (of London).

Beitr. Ass.: Beiträge zur Assyriologie. *Berl. Akad.*: Preussische Akademie der Wissenschaften zu Berlin. *Berl. Phil. W.*: Berliner Philologische Wochenschrift. *Berl. Stud.*: Berliner Studien. *Bibl. Ec. Chartes*: Bibliothèque de l'École des Chartes. *B. Ac. Hist.*: Boletín de la real Academia de la Historia. *B. Arch. d. M.*: Bulletin Archéol. du Ministère. *B. Arch. C. T.*: Bulletin Archéologique du Comité des Travaux hist. et scient. *B. C. H.*: Bulletin de Correspondance Hellénique. *B. Inst. Ég.*: Bulletin de l'Institut Égyptien (Cairo). *B. M. Soc. Ant. Fr.*: Bulletin et Mémoires de la Société des Antiquaires de France. *B. Soc. Anth.*: Bulletin de la Société d'Anthropologie de Paris. *B. Soc. Yonne*: Bulletin de la Société des Sciences historiques et naturelles de l'Yonne. *B. Mon.*: Bulletin Monumental. *B. Arch. Stor. Dal.*: Bullettino di Archeologia e Storia Dalmata. *B. Com. Roma*: Bullettino d. Commissione Archeologica Comunale di Roma. *Bull. d. Ist.*: Bullettino dell' Istituto. *B. Arch. Crist.*: Bullettino di Archeologia Cristiana. *B. Paletn. It.*: Bullettino di Paletnologia Italiana. *Byz. Z.*: Byzantinische Zeitschrift.

Chron. d. Arts: Chronique des Arts. *Cl. R.*: Classical Review. *C. R. Acad. Insc.*: Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres. *C. I. A.*: Corpus Inscriptionum Atticarum. *C. I. G.*: Corpus Inscriptionum Graecarum. *C. I. G. S.*: Corpus Inscriptionum Graeciae Septentrionalis. *C. I. L.*: Corpus Inscriptionum Latinarum. *C. I. S.*: Corpus Inscriptionum Semiticarum. *Δελτ. Ἀρχ.*: Δελτίον Ἀρχαιολογικόν. *D. & S. Dict. Ant.*: Dictionnaire des Antiquités grecques et romaines par Ch. Daremberg et Edm. Saglio, avec le concours de E. Pottier.

Échos d'Or.: Les Échos d'Orient (Constantinople). *Ἐφ. Ἀρχ.*: Ἐφημερίς Ἀρχαιολογική. *Eph. Epig.*: Ephemeris Epigraphica.

Fundb. Schwab.: Fundberichte aus Schwaben, herausgegeben vom württembergischen anthropologischen Verein.

Gaz. B.-A.: Gazette des Beaux-Arts.

I. G. A.: Inscriptiones Graecae Antiquissimae, ed. Roehl. *I. G. Ins.*: Inscriptiones Graecarum Insularum. *I. G. Sic. It.*: Inscriptiones Graecae Siciliae et Italiae. *Intermédiaire*: Intermédiaire de chercheurs et des curieux.

Jb. Alt. Ges. L. P.: Neue Jahrbücher für das klassische Altertum, Geschichte und deutsche Litteratur und für Pädagogik. *Jb. Arch. I.*: Jahrbuch d. k. d. Archäol. Instituts. *Jb. Phil. Päd.*: Neue Jahrbücher für Philologie und Pädagogik (Fleckeisen's Jahrbücher). *Jb. Preuss. Kunts.*: Jahrbuch d. k. Preuss.

Kunstsammlungen. *Jb. V. Alt. Rh.*: Jahrbücher des Vereins von Alterthumsfreunden im Rheinlande. *Jb. Ver. Dill.*: Jahrbuch des Vereins Dillingen. *Jh. Oesterr. Arch. I.*: Jahreshefte des oesterreichischen archäologischen Institutes. *J. Asiat.*: Journal Asiatique. *J. Am. Or. S.*: Journal of American Oriental Society. *J. Anth. Inst.*: Journal of the Anthropological Institute of Great Britain and Ireland. *J. Br. Arch. Ass.*: Journal of the British Archaeological Association. *J.H.S.*: Journal of Hellenic Studies. *J. Int. Arch. Num.*: Διέθνῃς Ἐφημερίς τῆς νομισματικῆς ἀρχαιολογίας, Journal international d'archéologie numismatique (Athens).

Kb. Gesamtver.: Korrespondenzblatt des Gesamtvereins der deutschen Geschichts- und Altertumsvereine. *Kb. Wd. Z. Ges. K.*: Korrespondenzblatt der Westdeutschen Zeitschrift für Geschichte und Kunst. *Kunstchron.*: Kunstchronik.

Lex. Myth.: Ausführliches Lexikon der griechischen und römischen Mythologie, herausgegeben von W. H. Roscher (Leipsic, Teubner).

Mél. Arch. Hist.: Mélanges d'Archéologie et d'Histoire (of French School in Rome). *Athen. Mitth.*: Mittheilungen d. k. d. Archäol. Instituts, Athen. Abth.

Röm. Mitth.: Mittheilungen d. k. d. Archäol. Instituts, Röm. Abth. *Mitth. Anth. Ges.*: Mittheilungen der anthropologischen Gesellschaft in Wien. *Mitth. C.-Comm.*: Mittheilungen der königlich-kaiserlichen Central-Commission für Erforschung und Erhaltung der Kunst- und historischen Denkmale. *Mitth. Nassau.*: Mittheilungen des Vereins für nassauische Altertumskunde und Geschichtsforschung. *Mitth. Vorderas. Ges.*: Mittheilungen der vorderasiatischen Gesellschaft. *Mon. Antichi*: Monumenti Antichi (of Accad. d. Lincei). *Mon. Mém. Acad. Insc.*: Monuments et Mémoires pub. par l'Acad. des Inscriptions, etc. *Mün. Akad.*: Königlich Bayerische Akademie der Wissenschaften, München. *Mus. Ital.*: Museo Italiano di Antichità Classiche.

N. D. Alt.: Nachrichten über deutsche Altertumsfunde. *Not. Scavi*: Notizie degli Scavi di Antichità. *Num. Chron.*: Numismatic Chronicle. *N. Arch. Ven.*: Nuovo Archivio Veneto. *N. Bull. Arch. Crist.*: Nuova Bullettino di Archeologia cristiana.

Pal. Ex. Fund.: Palestine Exploration Fund. *Πρακτικά*: Πρακτικά τῆς ἐν Ἀθήναις ἀρχαιολογικῆς ἐταιρείας.

R. Tr. Eg. Ass.: Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes. *Reliq.*: Reliquary and Illustrated Archaeologist. *Rend. Acc. Lincei*: Rendiconti d. r. Accademia dei Lincei. *Rep. f. K.*: Repertorium für Kunstwissenschaft. *R. Assoc. Barc.*: Revista da la Asociacion artistico-arqueologica Barcelonesa. *R. Arch. Bibl. Mus.*: Revista di Archivos, Bibliotecas, y Museos. *R. Arch.*: Revue Archéologique. *R. Art Anc. Mod.*: Revue de l'Art ancien et moderne. *R. Belge Num.*: Revue Belge de Numismatique. *R. Bibl.*: Revue Biblique Internationale. *R. Crit.*: Revue Critique. *R. Art Chrét.*: Revue de l'Art Chrétien. *R. Hist. d. Rel.*: Revue de l'Histoire des Religions. *R. Or. Lat.*: Revue de l'Orient Latin. *R. Ép. M. Fr.*: Revue Epigraphique du Midi de la France. *R. Ét. Gr.*: Revue des Études Grecques. *R. Ét. J.*: Revue des Études Juives. *R. Num.*: Revue Numismatique. *R. Sém.*: Revue Sémitique. *Rhein. Mus.*: Rheinisches Museum für Philologie, Neue Folge. *R. Abruzz.*: Rivista Abruzzese di Scienze, Lettere ed Arte. *R. Ital. Num.*: Rivista Italiana Numismatica. *R. Stor. Calabr.*: Rivista Storica Calabrese. *R. Stor. Ital.*: Rivista Storica Italiana. *Röm. Quart.*: Römische Quartalschrift für christliche Altertumskunde und für Kirchengeschichte.

Sächs. Ges.: Sächsische Gesellschaft (Leipsic). *S.G.D.I.*: Sammlung der Griechischen Dialekt-Inschriften. *Sitzb.*: Sitzungsberichte. *S. Rom. d. Stor. Pat.*: Società Romana di Storia Patria. *Soc. Ant. Fr.*: Société des Antiquaires de France. *Soc. Ant.*: Society of Antiquaries. *S. Bibl. Arch.*: Society of Biblical Archaeology, Proceedings.

Θρακ. Ἐπ.: Θρακική Ἐπετηρίς, ἐτήσιον δημοσίευμα τῆς ἐν Ἀθήναις θρακικῆς ἀδελφότητος.

Wiener Z. Morgenl.: Wiener Zeitschrift für die Kunde des Morgenlandes. *Z. D. Pal. V.*: Zeitschrift des Deutschen Palestina Vereins. *Z. Aeg. Sp. Alt.*: Zeitschrift für Aegyptische Sprache und Altertumskunde. *Z. Assyri.*: Zeitschrift für Assyriologie. *Z. Bild. K.*: Zeitschrift für Bildende Kunst. *Z. Ethn.*: Zeitschrift für Ethnologie. *Z. Mün. Alt.*: Zeitschrift des Münchener Altertumsvereins. *Z. Num.*: Zeitschrift für Numismatik.

CRETAN EXPEDITION¹

XXI

GORTYNA

I. SOME CONTRIBUTIONS TO ITS TOPOGRAPHY

THE researches which I made in the central part of Crete during the spring and summer of 1894, had for their principal aim to mark all the points of this complex region in which traces of the Mycenaean civilization came to light; to complete, to the best of my power, the observations made by others before me, — especially by Halbherr, Fabricius, Mariani, and Evans, — and to obtain some results of a general character in this order of explorations which gave signs of being largely fruitful.

The great valley of Messarà and the regions bordering thereupon had already yielded certain traces of primitive settlements, — some of the Mycenaean age, others of epochs of an earlier civilization. Hence, it was natural I should be inspired with the lively desire to examine whether Gortyna also, a city which became so important a centre in the classic times, had been itself a seat of this same Mycenaean culture, which discoveries had already shown flourishing in the early days of other illustrious localities of the historic age. (Cf. Fig. 1.)

I must, however, confess at once that such exploration, directed especially around the Hill of Haghios Joannis, at a short distance from Haghioi Deca, in the place where rose the Acropolis of Gortyna, was not crowned with the success anticipated.

¹ Continued from Vol. V, p. 451.

the Mycenaean centre in this place on the banks of the Le-thaeus could have been in any way the prelude to the important position occupied by Gortyna in epochs nearer to us, when social order, industry, and art shone brightly in her as in a powerful metropolis.

The Mycenaean goal having thus completely escaped me, but wishing nevertheless to meet the wishes of Professor Halbherr, who had requested me to study that locality, I thought of directing my researches to the clearing up of the topography of the acropolis and its surroundings, and to the examination of a sufficiently remarkable number of interesting remains which relate to epochs much more recent, but still ancient enough to be worth collecting before the violent action of the elements and still more that of man, combine to hasten their utter destruction.

The vast plain of Massarà, extending seawards from the slopes of the hills flanking it on the north, is completely scattered over with monumental memorials of the past. It is an area in which one comes continually upon the ruins of colonnades, public buildings, thermae, etc., giving some idea of the vastness and riches of this seat of the Roman Proconsul. But if the remains still visible are many, — still more apparent are the signs of the increasing destruction to which they are subjected! The renewed cultivation by the Greek peasants of the valley is by degrees reclaiming this plain so long abandoned. But it is at the expense of the ancient monuments of Gortyna; since the most important ruins are in course of destruction to furnish material to build miserable settlers' cabins, dry walls to divide the various fields as limitations of property, etc. Whoever, therefore, would expect to find in the Gortynian plain all the buildings given by Tournefort in his *Journey in the Levant* (Fig. 2), would greatly err, since the destruction during the course of a century has progressed immensely; and if the hopes of a systematic excavator can still be many, the fruits to be gathered from the monuments above ground are so much the fewer.

From the vastness of the field, I considered the problem of the general topography of Gortyna insoluble. I confined myself therefore within more modest limits. Comparing the state in which the ruins of the Acropolis were found, with their condition a score of years ago or so when seen by Pashley, Spratt, and others, I understood it would not be altogether lost labor to gather as much as could be still ascertained about the Acropolis itself; only regretting that the impossibility of excavating and the want of geodetic means obliged me to re-

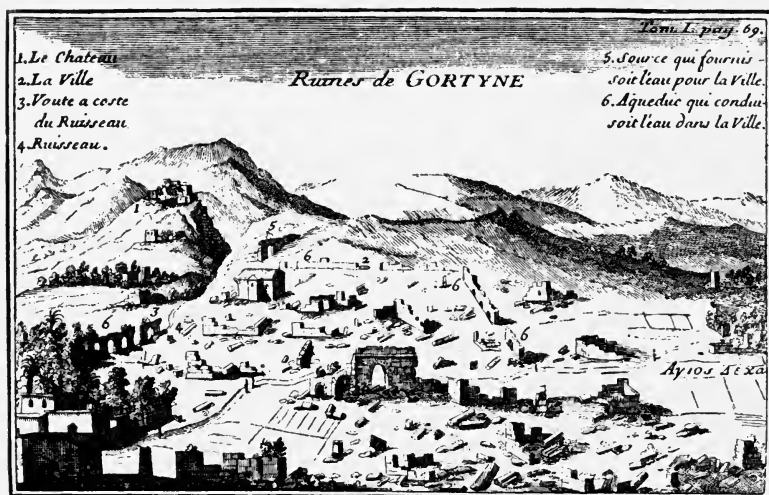


FIGURE 2.—TOURNEFORT'S VIEW OF GORTYNA AND ACROPOLIS.

nounce the attempt to draw up a complete scientific plan, and limit myself to sketches, and simple statements of facts, not illustrated by deeper researches. Thus they who will have the good fortune to succeed me in that field will perhaps have to find fault with me for much inexactness. But I was anxious to begin the important topographical study of the great Cretan cities, and to clear the way for those who will be able to proceed with it under more favorable circumstances. I hope, therefore, my successors will bear in mind the unfavorable circumstances and excuse me for whatever involuntary mistakes I may have made.

THE ACROPOLIS AND THE LARGE THEATRE

It is known to the students of Cretan antiquities that the city of Gortyna, which was in its most flourishing period during the Roman dominion in the island, spread widely over the plain now occupied by the four villages of H. Deca, Mitropolis, Choustoulia, and Ambeluso, between the torrent now called Mitropolipotamos, or Mitropolianos, and the extreme southern declivities of the mountains which form the watershed of Crete, and close on the north the plain of Messarà. From these lower slopes, somewhat projecting toward the plain, detaches itself a counterfort or spur, which dominates the plain at an equal distance between H. Deca and Mitropolis.

This hill of St. John, as it is now called, was the ancient acropolis of Gortyna (Fig. 3). As appears from the plan, this hill, composed of a polygonal compact mass of chalk-schist, has the form nearly of a cone with the point turned toward the mountain. The point of the cone is due to the confluence of two torrents. One of these flows from the centre of the island, with a considerable quantity of perennial water, descending from its upper valley through a deep gorge, as savage as are all the mountain clefts of Crete, and makes a course for itself through the plain, traversing the space where stand the ruins of Gortyna. It is to this narrow stream, bearing its silver thread of waters, sparkling between the oleanders even during the greatest summer heats, that belongs of right the glorious name of Lethæus. The Acropolis is then deeply cut into, at its northeast base, by the deep furrow opened in preceding geological epochs by the above watercourse; and on this side the declivity is very steep from the summit down, leaving almost no space for human habitation; also the northwest face is, in part, a sheer precipice toward a rivulet (quite dry during the hot season), which meets the course of the Lethæus at the north point of the Acropolis, descending by other terraced slopes from the tongue of rock which connects the Acropolis

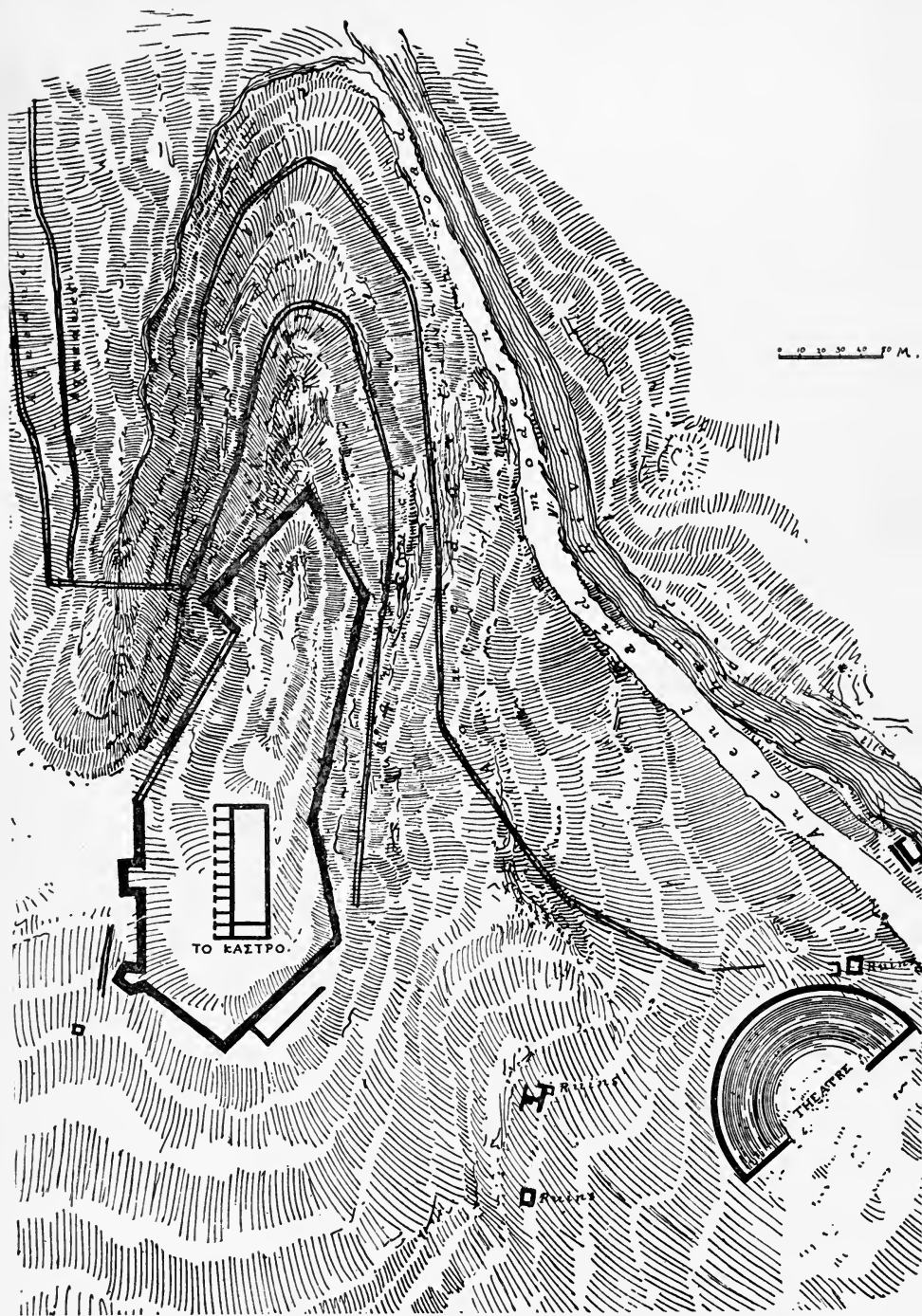


FIGURE 3.—THE ACROPOLIS OF GORTYNA: GENERAL PLAN.

with the chain of calcareous hills rising above it toward the northwest. If the northeast and northwest flanks of the Acropolis are scarcely accessible, in the other directions, however, the hill sinks gradually toward the plain, especially on the south and southwestern slopes, and leaves a space sufficiently ample for habitation. The summit of the Acropolis lifts its steep form, according to the axis of the hill, from north to southwest, in a height of 150 m. and a medium breadth of 50 m. From this description it results that the upper part of the hill, about 80 m. above the plain of Messarà, would form a natural fortress, easily defensible even from the western side, where the hill joins the rest of the mountain, since it rises not less than 40 m. over this tongue of earth.

No spring of water is at present to be found in these hills, nor in ancient times perhaps were they better provided by nature; certainly, the numerous houses whose traces still remain required for the needs of their inhabitants those great aqueducts which are still admired, and will form in part the subject of this our short description of the Acropolis.

At present the Acropolis, save at the points where the precipice descends sheer down to the valley, is covered over with ancient ruins and modern walls built with ancient material by the peasants of the neighboring villages, either to support the scanty soil, or for marking boundaries, or, still better, to clear as well as possible the ground recently restored to the cultivation of grain. And where the yellow ears of wheat do not raise their heads among the ruins, the scarlet poppy, the *cardus spinosus*, and other plants bear witness to the fertility of that thin soil. They are, however, serious obstacles to the exact restoration of the ancient remains.

The long existence of Gortyna and the succession of buildings even on the Acropolis were the reason why the more ancient disappeared, either destroyed or built over by the newer, or deeply buried under posterior foundations, or by the accumulation of demolished material throughout so many centuries. To all this, in the case of the Gortynian Acropolis,

is to be added the steep incline of nearly all the flanks of the hill, which hastened the splitting of those buildings built against them. And this is the cause why no edifices of the Mycenaean age are to be identified at Gortyna, but only such as date from the Roman or Byzantine period; while on the acropoleis of Goulas, Axos, Praesos, and other places in the island, ruins of the older period remain visible. Indirect proofs, however, are not wanting at Gortyna, as will be seen further on, of the existence of monumental buildings of the Hellenic age.

Here, however, as at Cnossos, Lyttos, Chersonesus, etc., what impresses the mind of the student are the works of the Roman conquerors; and they are works of peace and public utility, which constrain him to consider the Roman domination in the island as an epoch of peace and prosperity, if not the only one, certainly amongst the few which this poor island enjoyed. For any one going from H. Deca toward the hill of the Acropolis, the first group of ruins which presents itself is that of the Roman Theatre, situated on the sides of the hill, at the southeast, a few yards above the Lethaeus.

From the descriptions in Spratt's *Travels in Crete*,¹ this building, now reduced to utter ruin, was examined early in the present century by order of Veli Pasha, and on that occasion was found a statue representing the Bull of Gortyna. The discovery of this bull, which refers to the Rape of Europa legend, is remembered by all the old peasants of the district; and when I went to Bobia, in the declivities of the southern chain of Messarà, there was shown to me a plinth in marble, with roughened surface, and upon this plinth the still projecting four hoofs of an ox; by the unanimous agreement of these peasants, this marble fragment also came from Veli Pasha's excavation in the theatre. The state of the theatre when Spratt saw it must have scarcely differed from that in which I saw it; he gives measurements that approximate mine, but his notices are very incomplete, and are quite insufficient to give any idea of the edifice.

¹ II, p. 29.

The theatre must have been in a very different condition when seen by the Venetian traveller Onorio Belli, who leaves a

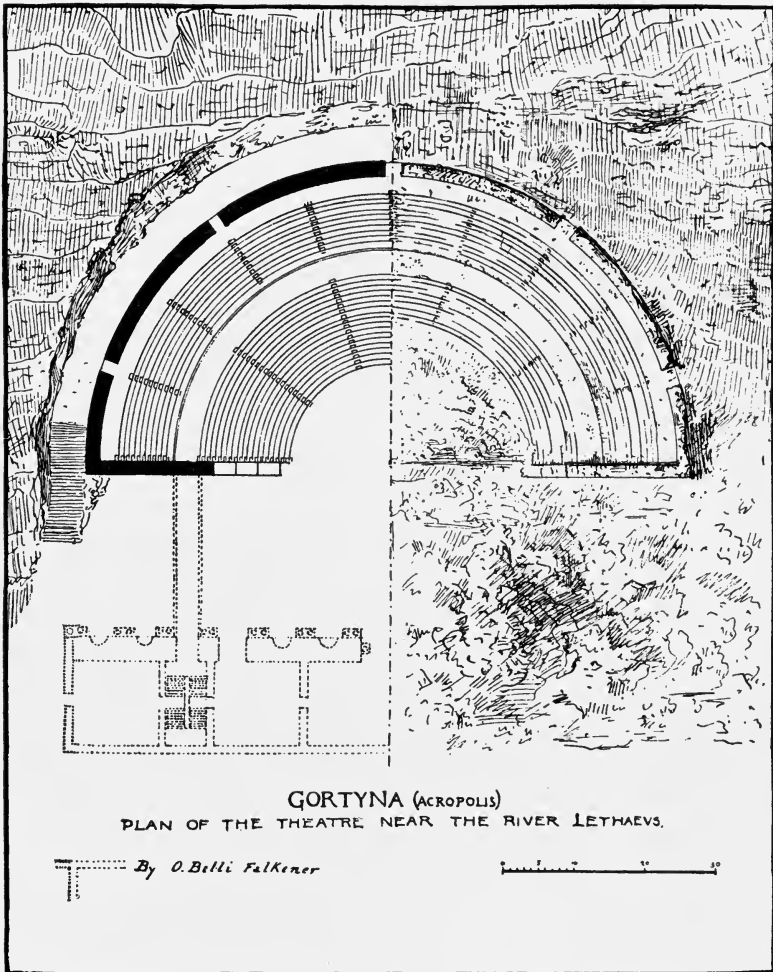


FIGURE 4.—THEATRE AT GORTYNA, NEAR THE LETHAEUS.

The scale is in metres.

memorial of it in his valuable sketches which have been partly published by Mr. Falkener.

In the plan here subjoined, prepared according to my measures and observations (Fig. 4), the data given by Belli are also

taken into account; by means of dotted lines are indicated the monumental stage and the lateral limits of the orchestra. The ranges of seats, and the stairs of the *cavea*, now in great part vanished, must have still been visible to the Venetian traveller, since they partly correspond with what I have been able to verify. The plan given by me and the section added thereto (Fig. 5) make it unnecessary for me to offer an extended description of these remains.

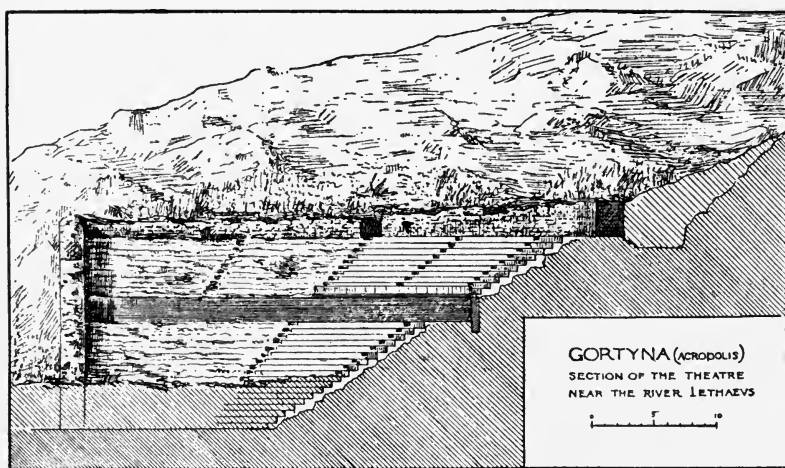


FIGURE 5.—THEATRE NEAR THE LETHÆUS AT GORTYNA : SECTION.

The greater part of the *cavea* rests upon the flanks of the hills, turned toward the south, so that the spectators had for a background the broad valley of Gortyna, dropping gradually between the mountains toward the azure gulf of Messarà; the stage must have been wholly constructed. The *cavea* was supported in its extreme wings by stout walls, against which leant the ascending ranges of the seats. These great walls, like all the works of the Roman age, were built with an internal kernel of *emplecton*, composed of fragments of stone bound together with very hard mortar, and were faced outside with brickwork, courses of which crossed the mass of the *emplecton* to render it more regular and compact. This procedure we find in all the

works of Roman builders; not only at Gortyna and throughout Crete, but in all places where the traces of their mighty works are to be found.

The dimensions of the theatre as measured by me, or such as I infer they must have been, on comparing Belli's data, are as follows:

Perimeter of the <i>cavea</i>	140.00 m.
Section visible of space for spectators . .	21.60 "
Complete section " " . .	29.00 "
Section of upper zone	7.50 "
Section of lower zone	13.00 "
Breadth of upper gallery	3.00 "
Breadth of lower gallery	4.20 "
Probable breadth of orchestra	28.00 "

In the wall surrounding and supporting the *cavea*, as can be seen from the plan and from the section (Figs. 4 and 5), in a thickness of 2.20 m., are the doors which gave access to the theatre from the hill, and probably from a terrace cut in the rock of the Acropolis. This terrace went all round the highest part of the theatre, for the purpose of preventing it from being flooded by the rain-water flowing down the hill at this point, which is very precipitous, though it has traces of buildings scattered over it.

How high this outer wall of the *cavea* was, it is now impossible to tell; it is now quite demolished, but the traces of it are still visible, as also the passages from the outside to the interior of the theatre; besides the middle entrance, 1.85 m. wide, there were two others, one on each side, 1.50 m. wide.

The *cavea* seems to have been divided into two unequal parts by a broad *ambulacrum*, or passage, situated in such a way that the upper zone was the narrowest. This *ambulacrum* is 3.60 m. broad; the wall which supports the upper zone is of bricks faced with *poros*-stone. Another *ambulacrum*, or gallery, 2 m. wide, went round the summit of the *cavea* and gave access to the various staircases.

The nature of the rock, in thin, not very compact strata, did not allow of its being cut into rows of seats, as was the case

in so many theatres of antiquity, such as at Syracuse; thus here the various graduated ranges of seats must have been constructed of masonry. The action of the elements and the devastating hand of man have contributed to overturn everything; the stone seats have nearly disappeared altogether, and the material went to fill up the orchestra and bury the stage. From the traces remaining we may conjecture, however, that the rows of steps were eleven in the upper zone and eighteen in the lower, and were 40 cm. wide to about 60 cm. deep. These are about the same dimensions that we find in all the Roman theatres of the best epoch, whether in the great capitals or in provincial centres. I quote, for example, the theatre of Atteia (Ashaga-Beikoi), described by Fabricius, in the district of Pergamon, where the steps are 42 cm. in breadth and 66 cm. in depth. It is impossible to say what was the form of the seats; it is certain, however, they were made of bricks covered with slabs of *poros*-stone. The *cavea* is now altogether in ruins, nor is there any hope that excavations will throw light upon its character. We may cherish more hope as regards the stage; a systematic excavation might reveal whether the not very frequent form of the stage (placed so far from the *cavea*), as transmitted to us in Belli's plan, can be really verified.

THE THEATRE NEAR THE PYTHION

The same point has still to be cleared up in the case of another theatre at Gortyna. It is that situated at the back of the Pythion, at the "Vigles," where Professor Halbherr made his interesting excavations in 1886-87. It returned to the light of day at the time of my visit to H. Deca; but it also bears witness to the progress of destruction since Onorio Belli's visit, and unfortunately the devastation is by no means arrested. No arguments and advice on my part could avail to dissuade the ignorant peasants from their purpose of stripping the edifice — revealed to them by chance under a heap of *detritus* — of the fine blocks of *poros*-stone which still formed

its arches and adorned its walls. In face of this destruction it seemed to me necessary to suspend for a short time my diligent examination of the Acropolis to study the facts here coming to light but fated to vanish under the cruel hand of the peasant; and therefore I ask forgiveness if I interrupt for a moment the description of the Acropolis and lead my reader down into the plain, near the temple of the Pythian Apollo, in the locality of the "Vigles," where were discovered real treasures for science, and where so many others await future archaeologists.

This place, called the "Vigles," owes its name to the fact that there the great mass of ruins, comprising the Pythion, the theatre, and other edifices, constitutes an actual hill, rising from 7 to 8 m. above the surrounding plain, which it commands after the fashion of a watch-tower (*βίγλα*). The name is a Byzantine corruption of the Latin *Vigilia*, or station for guards; and there was doubtless such a station kept here in the times when the Gortynian plain was exposed to the incursions of the Saracen and Arab corsairs, of whom we shall frequently have to make mention during the course of the present article.

To make briefer my description of this smaller theatre, which was probably connected with the worship of Apollo, I here add the plan (Fig. 6) and the section (Fig. 7), according to my measurements, completed according to the restoration given by Belli and edited by Falkener.

Captain Spratt was not able to recognize this theatre near the Pythion because of the still greater masses of ruins which, at the time of his visit, encumbered even more than now the plain of Gortyna. He only mentions it as the ruins of an indeterminate circular edifice, and marks it in his little plan, *Brick-ruin*.¹

What was still visible at the time of my exploration was nearly the whole *cavea* except the two wings and the lower ranges of seats; the orchestra, the stage, and the buildings behind it were buried beneath a field of corn which grew in

¹ Spratt, *op. cit.*, vol. II, p. 28.

marvellous fertility on a soil all scattered over with broken bricks and stones. At the same time, by studying the visible remains along with those coming to light while the peasants were carrying off fine pieces of *poros*-stone, to employ them for new purposes, one may form an idea of the theatre. It is,

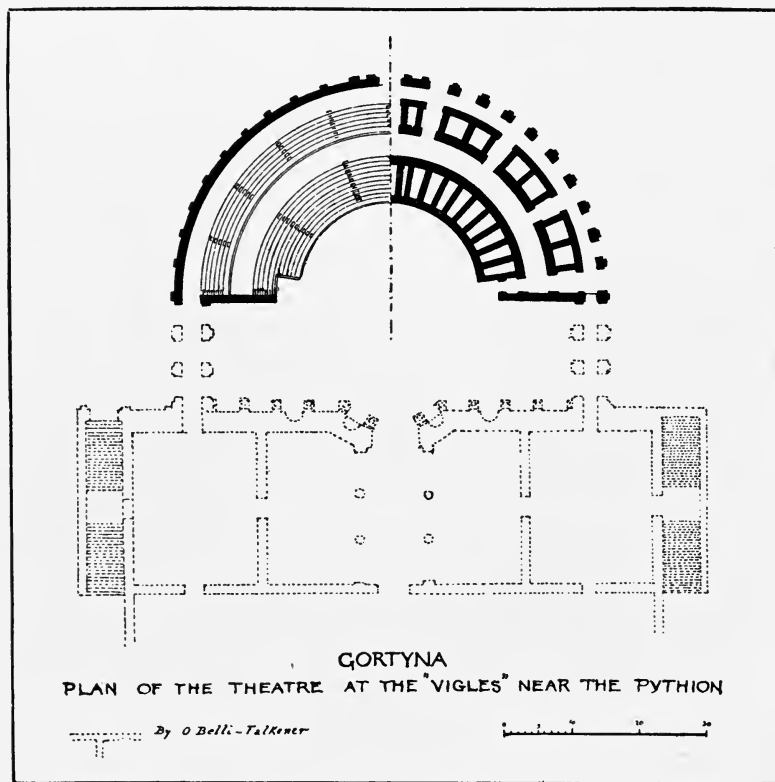


FIGURE 6.—THEATRE NEAR THE PYTHON AT GORTYNA: GROUND PLAN.
Scale in metres.

therefore, desirable that a regular excavation should be made, for the thorough examination of the stage, in order to find proofs of the singular arrangements given by Belli in his plan.

I ought to observe that, if even there may have once been a Greek theatre on this spot, contemporaneous with the constructions of the Python, what we have now here is entirely

a Roman edifice, as we may infer both from its general plan and from technical and architectural peculiarities. Although partly hidden by the soil and destroyed, the essential elements were still enough preserved to enable me to gather data for the plan and section.

Differing from the Acropolis theatre, which for the greater part was excavated in the rock, the "Vigles" theatre was

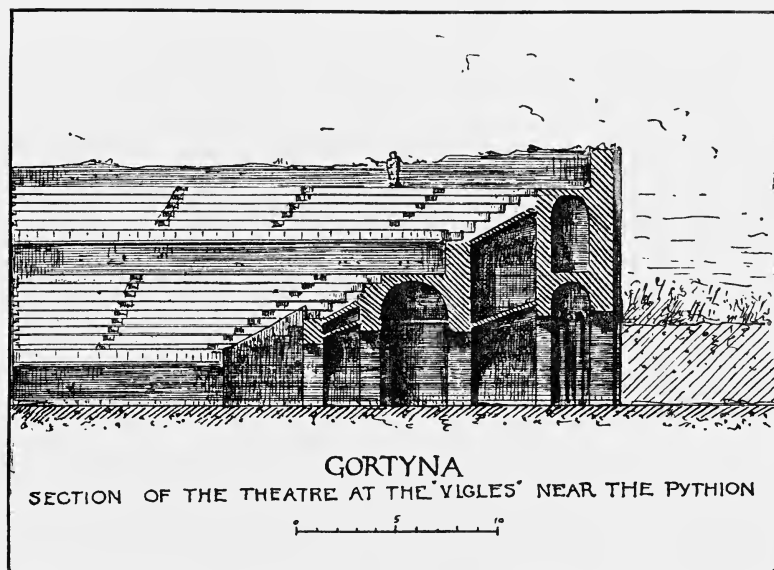


FIGURE 7. — THEATRE NEAR THE PYTHON AT GORTYNA: SECTION.

completely built of masonry, as also the *cavea*, which has two zones of seats and the stage now entirely buried.

The perimeter of the *cavea* is 102.00 m., and is marked by a massive wall 1.30 m. in thickness. Into this, as in other Roman theatres, open both the *fauces*, which give access to the orchestra, and the arcades which give light to the lower corridors, to the *ambulacra*, and to the *cavea*. Almost the whole of this powerful wall was, at a later time, despoiled of its exterior facing; but in the places where this is partly preserved, one can plainly see, as in the other Roman constructions at

Gortyna, that it was composed of an internal nucleus of *emplecton*, as already described, bound from space to space by a double course of large bricks that served to give to the wall the necessary consistence and strength. The external face of the wall, on the other hand, was covered by a band of large and handsome bricks disposed in rib fashion or pattern, so as to present a smooth surface, solid and elegant at the same time. To give the perimetral wall a still greater resistance to the weight of the internal building, it was strengthened by thick buttresses disposed at a medium distance of about 3 m. apart, and projecting about 0.70 m. Between these buttresses opened the *fauces* and the arcades.

The lower *fauces*, covered with vaulting from which the outer dressing in slabs of *poros*-stone had been removed, were buried up to the top; but from the measurement of their width, 2.40 m., we may suppose they were 4.70 m. in height. They were ten in number, on each wing of the theatre. In the centre was an entrance, which had from its position a greater importance; the *ambulacrum*, to which the central entrance led, — from what I could verify by crawling on all fours between the ground and the ceiling, — had its lateral walls dressed with slabs of stone alternated with the screens of brick.

As is plainly seen in the section, all round the *summa cavea*, between the perimetral wall and the highest range of seats, went an *ambulacrum* 2.50 m. broad, which must have led by the various staircases to the various tiers of seats. Below this *ambulacrum* were the vaulted corridors, 6 and 4 m. high and 1.80 m. wide, destined to facilitate circulation in the theatre, and to lighten the mass of construction which supported the highest *ambulacrum*. The tiers of seats were set upon vaulted spaces, between pilasters; these spaces were disposed in rays, and formed the skeleton of the *cavea*.

Between the *summa cavea* and the lower ran an *ambulacrum* 3 m. broad, also supported by a vaulted corridor, which I saw, still in excellent preservation. The difference in height between the *summa cavea* and the lower is 1.80 m.; I could not

ascertain with any certainty where was the passage between the one and the other zone of the *cavea*; by comparing it with other Roman theatres, and especially those of Asia Minor, we might be able to imagine a pair of staircases, not very wide, leaning against the wall of the gallery and following its curve. The covered corridor, which went round under this *ambulacrum*, and of which I was able to make exact measurements, was, as I said, well preserved in its various parts. It was the very beautiful blocks of *poros*-stone forming the vaulted ceiling which attracted the greed of some peasants of the place intent on building their farmhouses. The walls of the *ambulacrum* appeared to be dressed with bands of bricks alternating with bands of stone; entirely in stone, however, was the fine barrel-vaulted ceiling, which had an elevation of 2 m. and a thickness at the keystone of 1 m.

The stones of this ceiling, which fit accurately into each other, bore some letters and signs which served probably either for the stonecutters or the masons — the letters were these: M E. We frequently meet also with these other signs: Δ ∇.

Not less well preserved than this passage or corridor was the other, which was situated at the right extremity of the *cavea* and led from the grand gallery to the orchestra. At its opening into the central corridor it was 2.05 m. in width and 3.80 m. in height, and then gradually narrowed toward the orchestra, following the incline of the steps of the *cavea inferior*. This passage also had walls of brick with bands of stone; strengthened (as appears in the plan) from space to space by pilasters in stone.

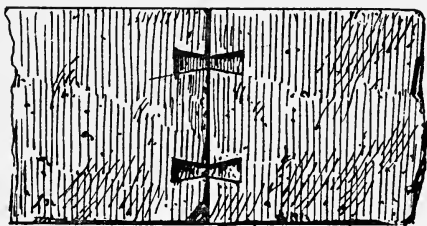


FIGURE 8.—BRONZE CLAMPS FROM A WALL NEAR THE PYTHION.

The joining and binding of one block with the other was effected, not only by great precision of labor, but by means of handsome bronze clamps and wings 15 cm. long and 5 cm. wide (Fig. 8).

These qualities, which indicate a true perfection of labor, would, but for the sad vicissitudes endured by this edifice, have handed it down to us in a marvellous state of preservation, such as I witnessed in those portions whose fate it was to disappear under rude hands before my eyes.

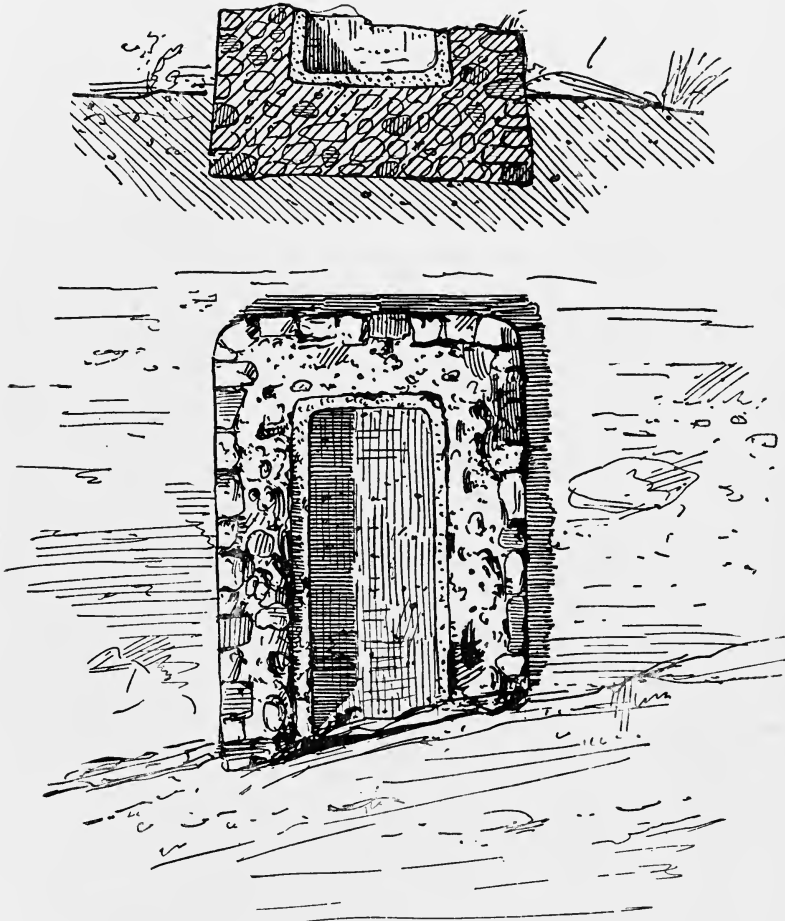
The orchestra and the stage, as I have said, were completely buried; nor could I ascertain whether the dispositions of the wings and the stage attributed by Belli to this theatre really existed. For the rest, from the variation that I could observe between Belli's plan and my own, it seems that the Venetian traveller was not always exact, or rather had not always the facilities for making complete and definitive observations. I think, therefore, that a regular excavation in the stage and the portion behind it would make us acquainted with the traces of the building which Belli calls the "Portico." This building as well as the theatre of the Acropolis, as described by him, and the two theatres of Hierapytna remind us strikingly of the general scheme of the Thersilion of Megalopolis (Arcadia), which has been illustrated by Gardner, Dörpfeld, and others.

THE AQUEDUCT

But now it is time to return to the Acropolis. Close to its theatre already described we see the remains of a construction, which was destined to serve as a reservoir for water, probably for the use of the theatre, where fountains and jets of water would certainly not be wanting, according to Roman custom, to refresh the spectator and to cool the plants and flowers laid out for his delectation.

This reservoir of water, which, however, is partly destroyed by the giving way of the ground, was, as appears from Fig. 10, a small rectangular basin about 4 m. long by 3.80 m. broad. The available internal space being 1.50 m. in width, the walls presented a thickness of 1.10 m., and were composed (as we have already seen in the walls of the theatres) of the extremely compact kernel of *emplecton*, protected by an external face of split stones, of moderate dimensions, and accurately

disposed in courses; the interior was covered with a strong impermeable stratum formed of mortar with pounded pottery strongly compressed. This system, which gave to the reser-



FIGURES 9, 10. — RESERVOIRS FOR WATER, NEAR THE THEATRE ON THE ACROPOLIS.

voir the highest degree of impermeability possible, we find employed not only on the Acropolis of Gortyna for cisterns and aqueducts, but in all Cretan baths or aqueducts, as observed by Halbherr and by me at Lebena, and especially in the mag-

nificent works connected with the aqueduct of Chersonesus also examined by me in the course of an exploration in Pediada.

In the reservoir near the theatre were still visible the traces of a vaulted ceiling, built of bricks and about a metre thick. This roof was to preserve the water from evaporation and prevent it from feeling the action of the strong solar rays. Beside the ruin of this reservoir there were others, less distinguishable; they all stood in some relation to the theatre. These reservoirs were fed by an aqueduct of great dimensions, and since with these hydraulic constructions are connected all, or nearly all, the buildings which we still find on the slopes of the Acropolis, I think this the proper place in which to sum up my remarks about this important aqueduct. It is but imperfectly described in Spratt's work, and it bears comparison with the best Roman aqueducts of the East.¹

For a city so large and extensive as was Gortyna in Roman times, an immense volume of water would certainly be necessary, when we consider the extreme heat in the plain and the hygienic and refined habits of the Roman or Romanized population.

If the Greek inhabitants could content themselves with the scanty springs issuing from the neighboring mountain, or with the waters of the Lethaeus, it was not so with the Romans, who required an abundant supply of water. This was to be found only in the centre of the island, — in the huge ravines of that great collector of humidity, the Cretan giant, Mount Ida. It is known that this calcareous mass is pierced in every direction with enormous clefts and cracks, ploughing the surface all over. Through these disappear the melted snow and rains, and filter down, to reappear at a lower level in the hills and at the foot of the mountain in purest and most abundant springs of water, which the ancients consecrated to the serene divinities of the streams and woods.

¹ Those of Constantinople; Cod. Theod. vi. 4, 30; Roudelet, *Addit. aux Comment. de Frontin*, p. 42, pl. xix; Von Hammer, *Constantinopel u. Bosphorus*, p. 507, 7.

To one of these fountains, situated on the southern slopes of Ida, the Romans had recourse to supply Gortyna and the plain of Messarà with water, in obedience to the Vitruvian precept of drawing water solely from the mountains. For the purpose of seeing how the plans were made for turning the water into the aqueduct, I betook myself to this same place, which is situated at about three hours from Gortyna. If my reader will

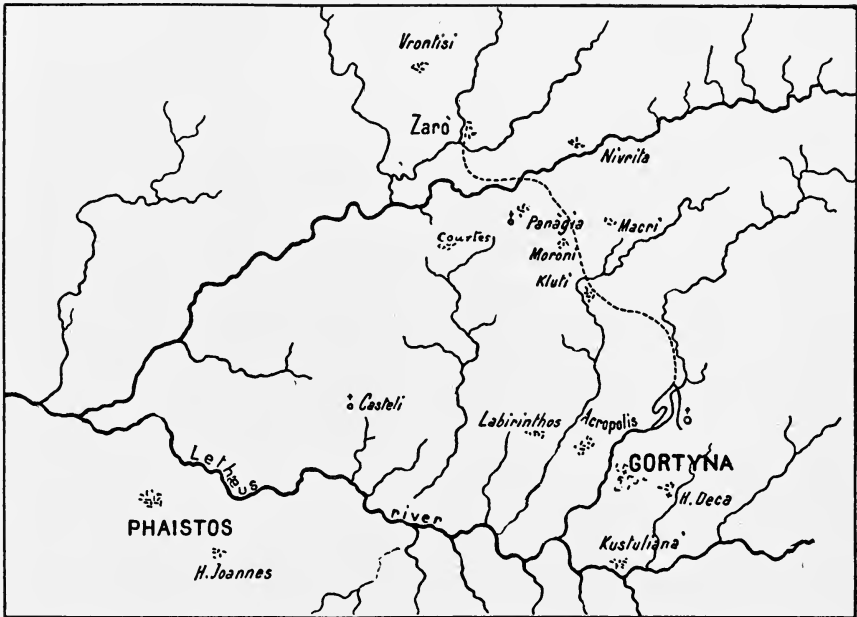


FIGURE 11.—PROBABLE COURSE OF THE AQUEDUCT OF GORTYNA.

permit me, I will lead him also thither for a short time, ascending out of the sultry plain to rest awhile in the cool and fragrant oasis of Zarò (Fig. 11).

From the southeast declivities of the higher range of Ida (now called Nida by the Cretans) there spreads a copious ramification of valleys, all very steep and rich in springs, which, uniting together a little above the village of Courtes (a spot now well-known in Cretan archaeology), form a pretty abundant stream, which flows by Potamitis and Vori and falls not

far from Dibaki into the gravelly and muddy malarious marshes of the Geropotamos. The valley, which more than the others winds into the heart of the chain, and cuts it most deeply, even to reaching the watershed of the island, is that which has for its chief town the smiling village of Zarò (*Zapó*), composed of two hundred and fifty Christian houses and thirty Turkish, in a pleasant and healthy situation, being dominated by the mountain peaks and girdled with woods of pine and fir; while the narrow level spaces and the first inclines are smiling with cultivated fields and orchards. The salubrity of the place and also its relative wealth are due to the very remarkable abundance of water. It was for just this reason that I went in search of the sources of the Gortynian aqueduct to Zarò, attracted thither by indications given me by the peasants as to a spring near that village called *ἡ μύνα τοῦ νεροῦ*, 'the fount of water.' Such indications had not deceived me, since at thirty minutes to the north of the village, at a little distance from the gorge opening into the valley of Vrontisi, I found the locality called *ἡ στέρνα*, where there is in fact the ancient cistern, still well preserved, and the spring full and abundant as ever. As may be seen from the plan (Fig. 11), the distance from Zarò to Gortyna is considerable, and it is a proof of the wealth and influence of the city, which could supply itself from such a distance with an unfailing supply of purest water.

At the mouth of the gorge, called from the cistern *τὸ φανάγγι τῆς στέρνas*, near the torrent which escapes from it, and just at the back of the steep cliff, is, in an excellent state of preservation, the edifice destined to capture and collect the water,—the *caput aquae*,—which I represent here in plan and section (Figs. 12, 13 *a*, and 13 *b*). It was a rectangular construction 37 m. long and about 5 wide; the height of the *piscina* (pool), still visible, was 4 m. It was attached, or built into the mountain by a spur of masonry, 0.70 m. broad, constructed to strengthen the building and protect it against eventual floods of the torrent. The edifice, solidly built, had walls 1.40 m. in thickness, in

solid *emplecton*,¹ laid in strata by means of double courses of brick; this brick dressing had in great part disappeared. It is a noticeable fact that the northern wall of the edifice rises 2.30 m. higher than the south wall, which arrangement I consider to have been made to protect the roof of the cistern from the stones which often fell from the rocks above. And the effects of this natural bombardment were in several places visi-

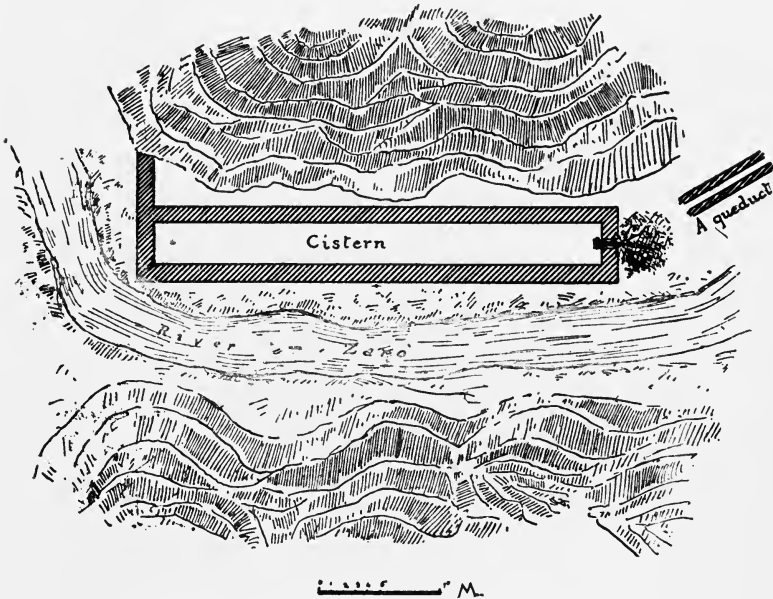


FIGURE 12.—THE CAPUT AQUAE: GROUND PLAN.

ble, this kind of parapet being here and there dismantled by the fall of calcareous blocks, which rolled down with every change of weather. The roof of the *caput aquae*, however, formed of strong concrete, had resisted so effectually that it was not possible for me to penetrate the interior, the channel being altogether obstructed by the trunk of a flourishing

¹ It is the construction we shall meet with so frequently in the Cretan monuments—often met with in Rome and the Roman provinces; for example, in the aqueduct of Merida in Spain. De Laborde, *Voy. Pitt. en Espagne*, p. 112, and pls. cl-clii.

green carob tree. The form and position of this channel, however, were quite well defined, as it was placed in the

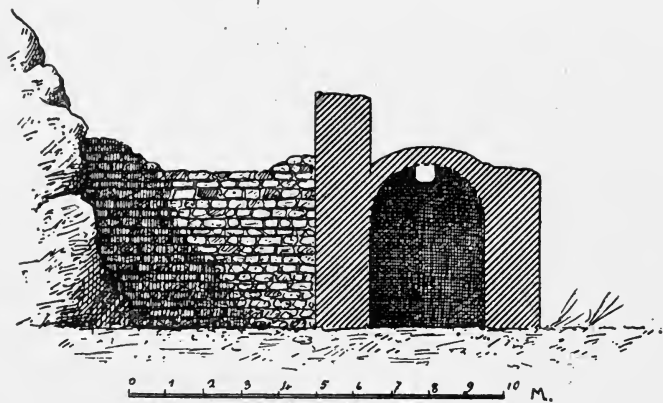


FIGURE 13 a.—THE CAPUT AQUAE: SECTION.

high portion of the cistern in such a way as to serve well as a filter, collecting the waters already cleared and freed from the earth they contained in suspension. In the place where

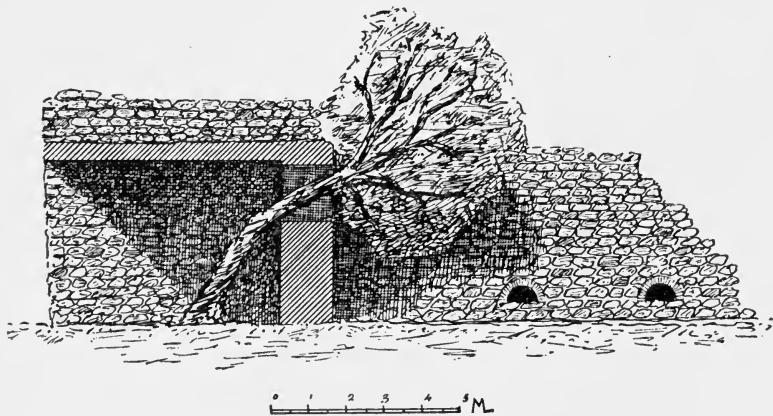


FIGURE 13 b.—THE CAPUT AQUAE: SECTION.

the Romans had built this vast *caput aquae* there now only flows a thin silver thread of purest water at the rate of two or three litres a second; but at a few hundred metres more to the

east of this point, we find, in the midst of an uncertain and watery soil, robed with an exuberance of flowery vegetation, the ancient fountain, which escaping from the bondage imposed upon it by man's hand, bubbles forth limpid and serene, nourishing with its cool and azure waters the privets and water-lilies that encircle it in a gay garland. It is in the presence of such springs, bursting forth beneficent and abundant in a hot and thirsty land, inhabited by a lively and imaginative people, that we can fully comprehend the power of the poetry of nature that fills the life of the Hellenic race.

Even now the fountain which the peasants distinguish by the name of *Λιμνίνας*, from the surrounding less important springs, issues from the mountain limpid and quite free from suspended material. She leaves the calcareous grit behind during her subterranean course, and springs to light well clarified, with scarcely a trace of deposits of carbonates either in the aqueduct or in the various reservoirs or "*castelli*" through which lies her course.

We have said that the mouth of the *caput aquae* continually fed the aqueduct from the superficies of the volume of water, and not from its base; but alas! the first segment of the aqueduct immediately contiguous to the *caput aquae* had been demolished by the peasants. A few metres, however, from that point we find the aqueduct again clinging to the cliff and almost completely preserved, as given here in Fig. 14. An extent 100 m. in length and 4.70 in height still presented itself, constructed in solid masonry and *emplecton*, dressed with courses of split stones. In this very powerful wall of more than 2 m. in thickness ran the water-channel (the aqueduct proper), 0.80 cm. deep and 0.50 cm. wide to 35 cm. at bottom. It was entirely dressed with a twofold layer of mortar and pounded shells, and must have been closed over with a low vault which, according to the rules of Pliny and Frontinus, protected the water from the impurities of the rain and the solar rays. To be sure, in this portion of the aqueduct the protecting roof was wanting, but the traces of it were

distinctly visible. The extreme care taken by the Romans to preserve the purity of the aqueducts — especially to guard against injurious leakages into it — is revealed here by a whole system of drainage represented in Figs. 14 and 15, consisting in small arched channels 0.45 cm. high and 0.60 cm. wide, which at distances of from 20 to 25 m. from

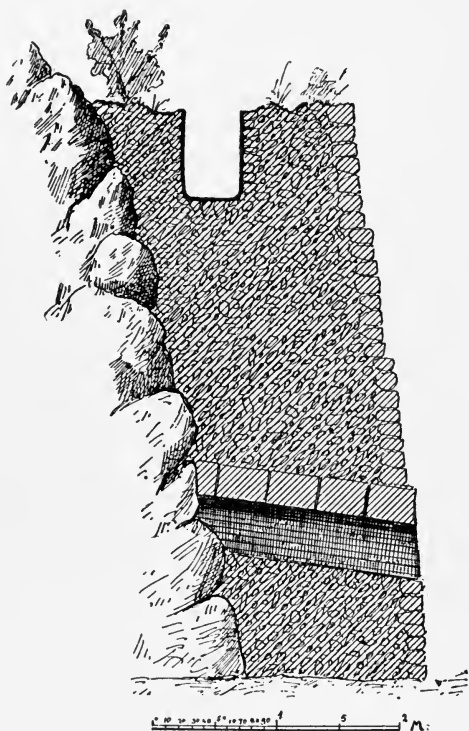


FIGURE 14.—AQUEDUCT BETWEEN ZARÒ AND GORTYNA: WATER CHANNEL.

each other crossed with a slight incline the line of the aqueduct. These little channels served to drain off the rain and other waters of the cliff against which the aqueduct was built, and which in the course of time would have damaged the masonry of the aqueduct.

The aqueduct, beginning more than thirty-five kilometres from Gortyna, started from this smiling scene of its origin

in a southeasterly direction, crossed the valley of Zarò, and touched those of Panagia, Moroni, and Pluti.

For various reasons depending on the state of the island and the restricted time allowed me, I was not able to follow the whole course of the aqueduct, which will be the object of future researches. We shall meet it again, however, at a few kilometres' distance from the upper entrance of the gloomy and frightful gorge which opens into the Gortynian plain.

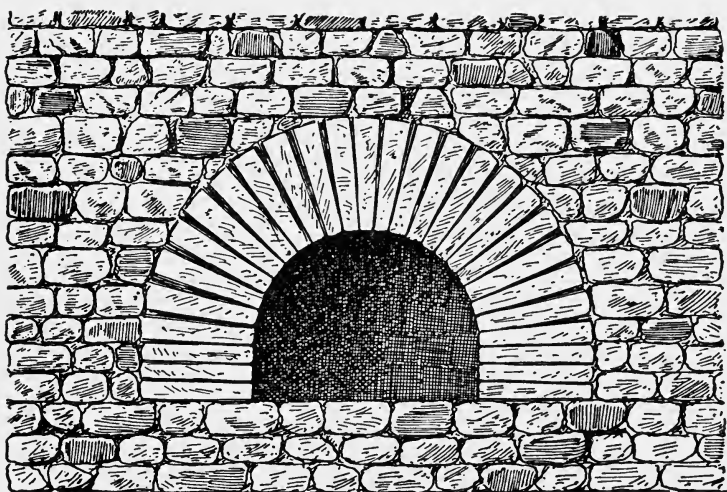


FIGURE 15.—CHANNEL OF AQUEDUCT FROM ZARÒ TO GORTYNA.

Before, however, leaving the cool valley of Zarò, I must mention that near the spring some remains exist, apparently of a Roman villa, as may be seen in the accompanying plan (Fig. 16). There was still above ground a sort of entrance passage 8 m. long and 5 m. broad, leading into a spacious chamber 30 m. long and about 9 m. wide.

The solidity of the walls, built in solid *emplecton* and dressed in beautiful bricks disposed with the greatest accuracy, lead me to suppose it the villa of some rich citizen of Gortyna, where the beauty and salubrity of this mountain resort could not

have escaped attention; and I recommend the site to some future explorers of the island as a possible field for important discoveries.

If we have not been able to accompany the aqueduct along its whole course from Zarò to the valley of Messarà, we, how-

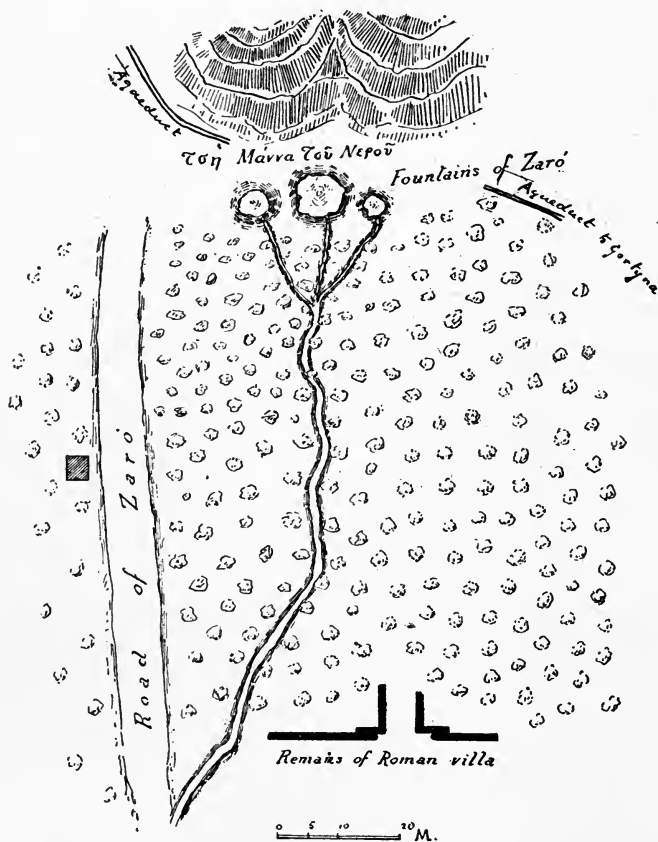


FIGURE 16.—FOUNTAINS NEAR A ROMAN VILLA.

ever, meet it again at the entrance of the gorge, about 500 m. from the Gortynian Acropolis, with a truly surprising group of constructions. As is seen in the sketch of the general plan (Fig. 17), we find the aqueduct branching off into two parallel watercourses, 43 m. apart from one another, along the right

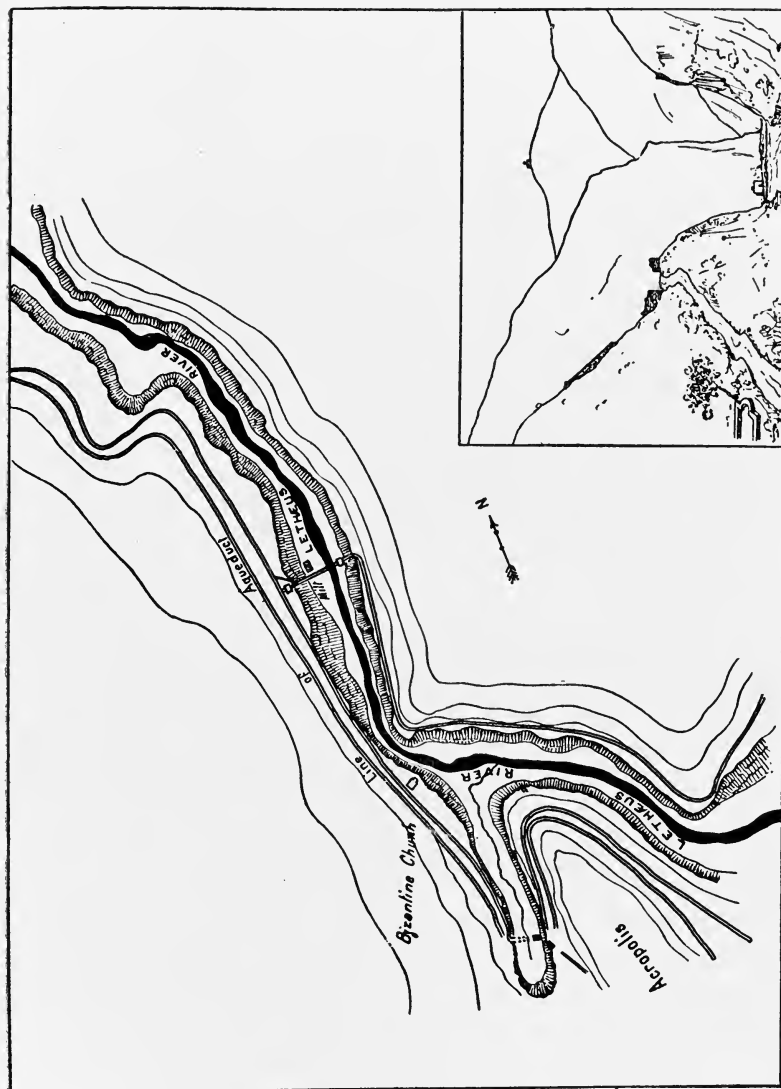


FIGURE 17. — THE ROUTE OF THE AQUEDUCT NEAR THE ACROPOLIS.

flank of the valley at a great height (about 100 m.) above the river — a disposition necessary for conveying the water to the higher quarters of the city.

From the absence of all deposits in both of the channels, we may venture to assert that this is one and the same aqueduct originating at Zarò ; and that, at a certain point which I have not yet been able to determine, the main line was divided into two parallel branches destined to supply the various parts of the city.

I remarked the two aqueducts at the point where, from the higher slopes, they gradually descend along the side of the valley, following its curves into a little dell near the place called *σ τὸ μῦλο*, from a mill which forms a characteristic spot in the depth of the *φάργγι* gorge.

Of these two aqueducts, the higher seems to have been larger than the other ; they are, however, constructed exactly alike, and with the same scrupulous care to preserve the water from the sun's rays. Both are supported along the side of the mountain, and placed upon a ridge of the steep declivity, and constructed in *emplecton* with the external face in split stones laid in courses. The channel, lined with a strong stratum of mortar and pounded shells (as before described), had a different form in the two aqueducts and in the various points in which I made my sections.

The higher aqueduct has its channel mostly rectangular, 0.65 m. in height and 56 m. in breadth, narrowing a little at the top. In some places, however, especially near the Acropolis and toward the mouth of some one of the reservoirs or pools, the channel becomes narrower and is 1 m. high, showing that peculiar section, large at the bottom and narrow at the top, which is found in the Roman aqueducts, and which is in accordance with the rules prescribed by the Roman architects (Fig. 18). The construction of the aqueduct is 1.70 m. high and 1.80 m. in thickness.

The lower aqueduct, on the other hand, preserves always the same section and has — at least for the stretch near the Acropo-

lis — the same volume of water (0.55×0.45 m.; see Fig. 19). The construction of this aqueduct for the stretch aforesaid is only 1.10 m. in height and about 1 m. broad; but it is to be noticed that it was this lower aqueduct which, as we shall see, had for the most part to supply the many sluices that fed the lower quarters of the city; hence, in its earlier course, it would be considerably larger.

Both the aqueducts had the channels covered in masonry for the above-mentioned purposes. At some points were evident

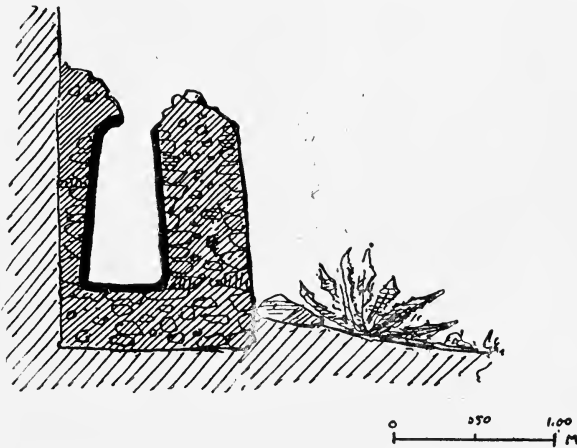


FIGURE 18.—SECTION OF THE AQUEDUCT (UPPER).

repairs made at epochs of lesser prosperity and with greatly inferior work.

As is seen in the plan given (Fig. 17) and from Fig. 20, one of the most remarkable works of the Gortynian aqueduct was a great siphon: a fine application of the principle of equilibrium of liquids well known to Roman hydraulists, and largely applied in the aqueducts of the Campagna and the Provinces.¹

From the aqueduct starts, perpendicularly to its axis, a channel, resembling it as to section and dressing, which after the

¹ The aqueducts of Patara, Texier, *Desc de l'Asie Mineure*, III, p. 224, pl. clxxix; also aqueducts of Lugdunum (Lyons); Bonardet, *Add. aux Comment. de Frontin*, etc.

course of little more than a metre enters a chamber, 3.20 m. wide and certainly more than 3 m. long, constructed in *emplecton* varied by courses of bricks, and dressed externally with bricks and internally with the usual impermeable lining. From this chamber, certainly destined to collect the water and give it the needful pressure to make the spring across the gorge and to rise again to the same height on the opposite ascent, the aqueduct turned off, descending a very steep incline for a space of 11 m.

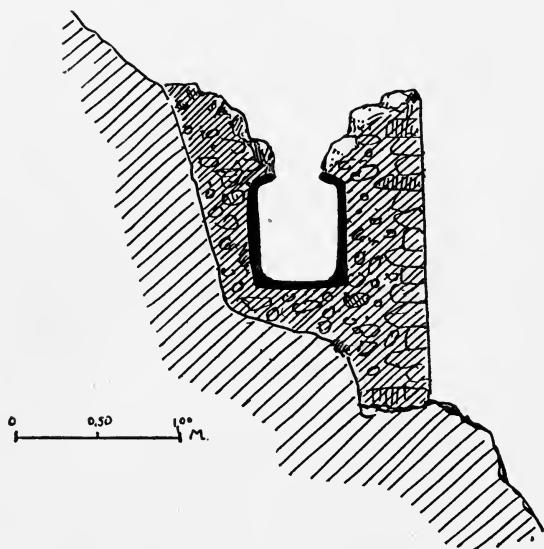


FIGURE 19.—SECTION OF THE AQUEDUCT (LOWER).

It is to be noted that besides this conduit which detaches itself from the aqueduct, there was another (Fig. 20), which about 10 m. higher up left the aqueduct in an oblique direction to join the descending channel, perhaps for the purpose of diminishing the pressure of the water on the walls of the siphon. After this stretch of sheer descent, the aqueduct has a more level course, in which the channel presents in the plan some angles and curves intended to arrest the impetuosity of the water that comes from a distance, and from higher levels in a closed channel, at a naturally ever increasing speed.

The aqueduct afterwards begins the descent again, but very gradually; the channel is elevated for a space of 9 m. as the mountain descends, until the aqueduct reaches a height of 5 m. along the road which skirts the gorge, a road that certainly

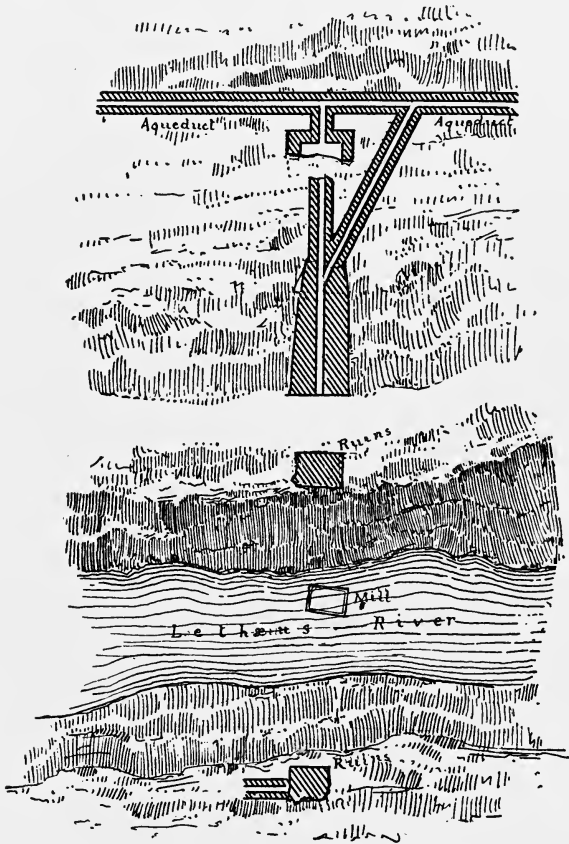


FIGURE 20.—PLAN OF THE SIPHON IN THE AQUEDUCT NEAR THE LETHÆUS.

followed the line of a very ancient way, along which this water-course reared its massive pile, which was strong enough to defy with impunity the enormous pressure of the water at this point, and far more effectually than the strongest metal conduit system could have done.

Skirting this kind of pile it passes the present mule path

to Rafti; and as from certain substructions and foundations recognizable lower down, we may suppose that this path follows the line of an ancient road, there is little doubt that at this point the siphon had an arch, now destroyed, under which the road passed. After the interruption by the mule path of about 8 m., we see a stretch of the aqueduct of some metres reaching the edge of the torrent, which runs here imprisoned between steep banks about 20 m. high. Notwithstanding all my researches in the depths of the gorge, I was quite unable to discover whether the aqueduct made a sheer descent at this spot to the bed of the stream, to reascend to its own level again, or whether it spanned the gorge with a bold arch 25 m. broad. This supposition does not seem to me tenable, because even allowing for the great and continual force of the torrent, some traces of the viaduct and fragments of the arch would have surely remained in the bed of the stream. But not to lose time in conjectures, and keeping to facts, we must observe that on the left bank of the gorge, opposite the pile on the right, the channel of the aqueduct is again seen in the steep wall of rock, ascending toward a chamber placed almost at an equal height with the siphon. Alas! the denudation of that precipitous rock, totally divested of vegetation, left me without possibility of foothold to examine that part of the siphon accurately. It was at the same time quite plain that the aqueduct from that chamber, ever clinging to the flank of the mountain, proceeded with a slow and regular decline along the whole gorge in front of the Acropolis; until having reached the mouth of the valley it bent suddenly eastward, gliding close to the hill, and thus becoming a kind of general provider from which detached themselves the various conduits for supplying the villas and the quarter situated in the region now occupied by the village of H. Deca. In this section, the aqueduct, known to the peasants with the name of *καμαράκια*, and directed toward the east, was a construction about 1.70 m. high and the same in breadth, with a channel 0.50 m. wide by 65 cm. high. Figure 21, here subjoined, gives a section of

a portion of this aqueduct in the plain, situated near the church of St. Titus, and probably destined to bring the water to a large group of buildings, called the Megali Porta, and which for various reasons I am inclined to think the *Thermae* of the city. But let us return to the gorge. After the ruins of the siphon, the aqueduct in its twofold course passes near the ruins of a little Byzantine chapel, which, built of fragmentary material and near the mule path, is supported on evident traces of ancient foundation walls (Fig. 22). We advance then (the two branches of the aqueduct always approaching

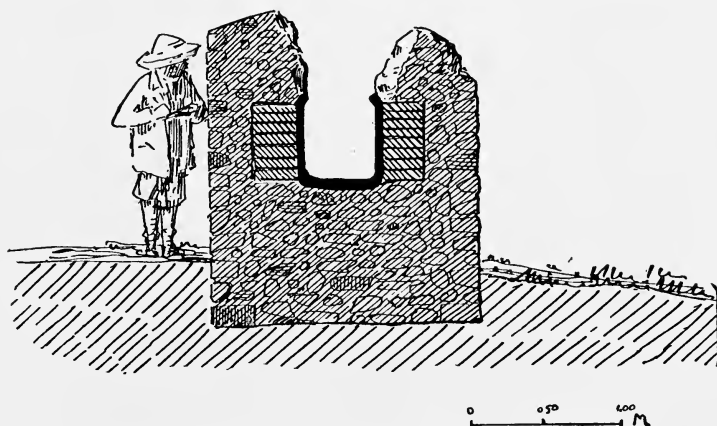


FIGURE 21.—THE AQUEDUCT ON LEVEL GROUND.

nearer) into the valley of the *pváki*, which skirts the Acropolis on the northwest, ascending it almost entirely near the point at which the hill of the Acropolis joins the mountain. At this point, the two lines of aqueduct approach very near, the one remaining, however, about 5 m. lower than the other, and crossing the valley here also with a siphon bridge, of less grand dimensions, however, than that already described.

Here also the structure is much ruined; but the right shoulder of the bridge, or viaduct, is visible for a space of 7 m. in length by 3 m. in width, with 4 m. in height; constructed as usual in *emplecton* with facings of split stones, and the open arches of the viaduct regularly disposed.

Along the other side of the *pvaki*, but about 5 m. lower, as already said, is the other branch, distant 12 m. from the right one; built as usual of *emplecton* and dressed with alternate strata of stones and bricks; of this branch portions of the arch built with large bricks were still visible. Although 12 m. did not make too vast a span for the arch of a Roman engineer (that across the river Lys on the road to *Summum*

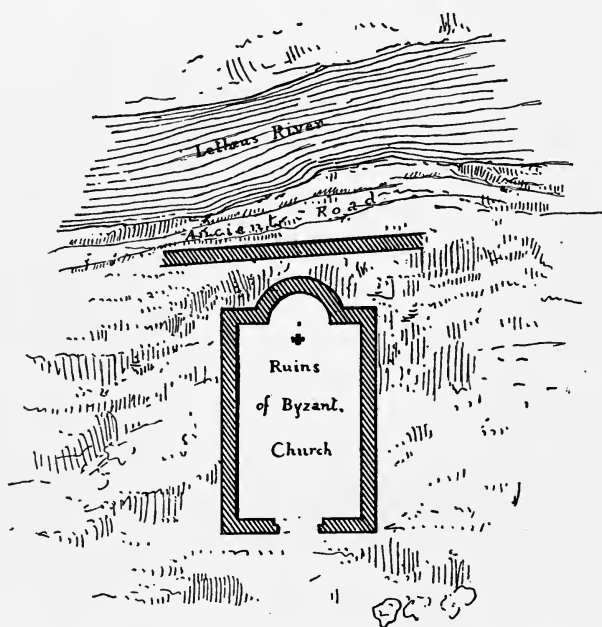


FIGURE 22.—PLAN OF A RUINED BYZANTINE CHURCH NEAR THE LETHAEUS.

Poeninum in the Val d' Aosta, is more than twice as wide, 30.50 m.), I must say that in the present case it was but small, and that the aqueduct spanned the *pvaki* with two arches of about 5 m. each, resting on a pile of about 2 m. in thickness.

As the left pile, lower than the other, carries the channel of the lower aqueduct, while the right pile bears the traces of the upper channel, we may assume that the bridge had two stories, either obtained by a second row of arches built above the first,

or by an elevation supported upon the lower arcade, as is frequently the case in the aqueducts of the Roman provinces.¹

On the declivity of the Acropolis, we find the traces of a new forking of the aqueduct: two arms, bent first toward the northeast point of the Acropolis, make another turn in the gorge and coast the eastern side; the other branch bends southwards, skirting the western slope of the Acropolis, and then sinks with a rapid incline toward that part of the city situated west of the Lethæus, where now are the fields of Ambelouso. This section of aqueduct in one point below the Acropolis passes into the ground for about a hundred metres, keeping at a depth of from 8 m. to 12 m., and this for the purpose of avoiding a spur of the Acropolis. In this tract of *cuniculus* (subterranean conduit) is still visible and well preserved one of the wells which, as prescribed by hydraulic rules, served for ventilating the underground channel.² The well (Fig. 23) in quadrate section, at the mouth measuring 1.50 m., is 12 m. deep, reaching the channel, which I have been able to follow for 45 m. in the plain until it again ascended to the surface. The well was accurately built in split stones, and in the portions nearer the surface was restored at a less ancient date, as it served the peasants for drawing up water from a spring which followed, and still follows, this underground passage excavated by the hand of man.

The two parallel channels which make the round of the Acropolis, entering the horrid gorge, are in many places cracked and broken from the steepness of the rock; and their course is therefore quite visible, as well as their construction.

The upper aqueduct, although its whole course can be followed upon the slopes of the Acropolis and its formation studied, is the one which has suffered most from the action

¹ Examples of double lines of arches: Segovia, Gomez de Sammasuta, *El Agueducto de Segovia*, Madrid, 1820; Canina, *Arch. Rom.* p. clxvi; that of Tarragona, Laborde, *Voy. Pitt. en Espagne*, I, p. 32; Gard, near Nîmes, Menard, *Hist. Ant. Nîmes*, p. 69.

² Pliny, *Nat. Hist.* xxxi, 31; Vitruv. viii, 7.

of time and the conditions of the soil. But if it is badly preserved, there are, on the other hand, quite visible some constructions connected with it. One of these is a vast rectangular enclosure formed by a stout wall, of the thickness of 2 m., with the external facing of stones carefully disposed and based upon a kind of step in larger stones, and for the most part buried. Toward the interior the wall of this vast chamber was about 2 m. high, with a kind of stone bench,

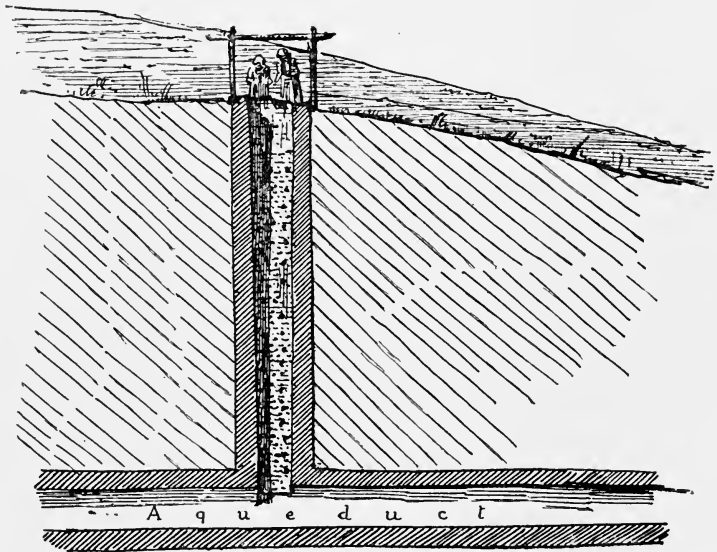


FIGURE 23. — WELL INTO THE AQUEDUCT NEAR THE ACROPOLIS.

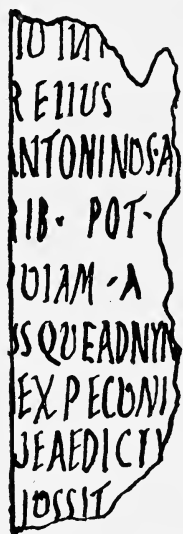
0.70 m. broad, running all round at the half height of the wall. From the traces which were visible without attempting excavations, the whole floor was laid down with an impermeable pavement; it is certain that at the distance of 8 m. the upper aqueduct was visible in this direction. Above the northwest wall of this chamber was founded the wall defending the Acropolis, of which we shall speak farther on, and the ruins of which had invaded our ground. As there was no trace of any roof, this could not have been a reservoir for water; but there had probably been an *exedra* for gymnastic

exercises in Greek and Roman ages upon this hill, and here might have been the swimming-bath for the youths of Gortyna in connection with it. After this *piscina* the upper aqueduct proceeded toward the west, and then south, but the remains are only visible for a short distance.

Also for reservoirs were destined two buildings, which are connected with the lower aqueduct. They are of lesser dimensions than the above, but of equally perfect execution.

Another chamber, situated about 0.50 m. southeast of the theatre, 3.50×3.50 m. square, and 1 m. above ground, was so well preserved with its internal coating as to be still quite fit to use as a bath.

Along with all these hydraulic studies I must also place this fragmentary Roman inscription, found in a stable of the village of H. Deca, where it does duty as the architrave of the door. The stone is calcareous, of the island; the greatest height of the portion preserved is 0.52 m.; width, 0.35 m. Size of letters, 0.04 m.



.....
 . . . *Au]relius* .
 . . . *A]ntoninus A[ug.]*
 . . . *t]rib. pot* . . .
 . . . *viam a* . . .
 . . . *usque ad nym[phaeum]*
 . . . *ex pecuni* . . .
 . . . *atqu]e aedic*
 . . . *iussit*

From the epigraphic characters such inscription would seem to refer to Elagabalus (A.D. 218-222), because his title was

precisely *Imp. Caesar M. Aurelius Antoninus*, and his sympathies for the Oriental provinces of the empire are well known. From the context of the inscription it would seem to relate to a road, made by order of the Emperor, which led from a given point to a *nymphaeum*. Given the enormous quantities of ruins still unexplored in the plain of Gortyna, it is quite outside our present business to inquire as to which of these the *nymphaeum* of the inscription would be applicable.

II. THE FORTIFICATIONS OF THE ACROPOLIS

The idea of an Acropolis naturally leads us to think of a wall of defence behind which the garrisons sheltered themselves; for no matter how strong a position may be in itself, a strengthening of the weak points was never neglected in the acropoleis or fortresses of all places and all times, as in Acro-Corinth, Château Gaillard, Suse, and the entrenched camps that surround the historic heights of Rivoli.

The hill also of H. Ioannis is surrounded near the summit by a girdle of wall, in part demolished, but the line of which it is still quite possible to follow, as is given in the general plan of the Acropolis (see Fig. 3), and from the various sketches added here.

As the hill of the Acropolis (as already said) rises with a continuous ascent, and has at the summit but a circumscribed tract of level ground, almost a great "ass's back" or convexity, it is evident that the wall of circumvallation must be always built close to the steep edge of the Acropolis, and hence exposed, like other edifices, as already mentioned, to the crumbling of the rock. Examining the general plan of the walls, it is certainly possible to form a clear idea of their course; it will be proper here to add some touches and some reflections upon the particulars of the wall itself and its mode of construction, the only data which can serve us for ascertaining approximately the epoch to which we can carry it back.

The wall of circumvallation of the Acropolis has a circuit of

about 500 m.; it is hence a not indifferent circuit, nor less than that of various ancient castles or strongholds. In general this wall marks the point at which the sides of the Acropolis fall sheer down from that convex back which forms the summit of it, and they have hence a not easily accessible front turned everywhere to the enemy, according to the military principle adopted in all ages, to render the approach of the assailants as difficult as possible.

Commencing our circuit from the northern extremity of the Acropolis, we perceive the wall of circumvallation, for a space of 33 m., rising from the ground at the medium height of 5.50 m. to 6.10 m. at the highest point, and with a thickness of more than 2 m. For this length the wall still preserves, in part, its exterior facing of great blocks of *poros*-stone, well squared and carefully placed, derived, as we shall see later, from other preëxisting buildings, demolished either before or on occasion of the erection of this defence; however, great part of this outer facing has fallen, the lower part of the wall having been stripped, either during a siege, or more probably by the peasants in search of material for their huts in the plain. With a sudden angle at the northwest extremity,—an angle which almost indicates the vertex of the great triangle formed by the Acropolis,—the wall turns toward west-south-west, rising from a rather broader base than the rest of the wall, to a height of more than 4.50 m., for a stretch of about 23 m., in which were still preserved in part both the outer dressings in great blocks of *poros*-stone, which enclosed the kernel of *diamicton* or *emplecton*.

After this section of 23 m., the wall on the west side has an interruption; its course, however, is quite visible. From the traces remaining, a sharp drawing-in of the line of wall is perceptible, following the shape of the hill. At 70 m. from the northwest angle we come upon the wall again for a space of 13 m., but only the internal formation is preserved; and, after a long gap of about 40 m., where only a few traces are left, we come again upon the wall, well preserved and of a

medium height of 4 m., which runs with a slight bend eastward for a space of about 26 m. After this we come upon a sort of large tower, projecting 7.50 m. from the line of wall, with a front of about 10 m. This kind of tower, the base of which is formed by a spur of the mountain, is only preserved in its lower portions for 3 m. or 4 m. of the height, and hence we cannot tell whether an actual tower was here erected, with upper floors, or whether this was merely a projection of the

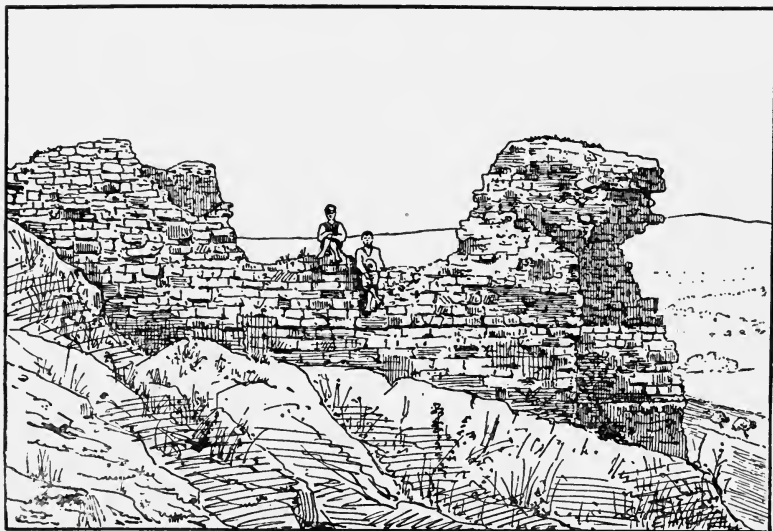


FIGURE 24.—VIEW OF THE POLYGONAL BASTION (FROM THE NORTH).

wall of circumvallation to strengthen the angle which here presented itself.

From this kind of tower the wall, always visible and elevated some metres above ground, directs itself toward the south with an oblique line, dominating the weak point of the Acropolis; that is to say, where the declivity of the hill is least abrupt, and where it joins on to the neighboring mountain. At this point the wall presented a tower, in form of an irregular polygon, forming a projecting spur, almost a bastion, of the maximum height, still preserved, of 6 m. This tower, the sketch of which I here give (Fig. 24), consists of a stout mass of

masonry, 2.90 m. in thickness, made in the usual manner, and faced externally with regular bands of small split stones. In the lower part, however, project from the ground courses of stones of greater dimensions, forming a strong basement. This large tower encloses in its interior a chamber 5.20 m. in length by 3.40 m. wide, with walls curved toward the outside. Traces of the vaulted roof are still visible, which collapsed internally. These ruins and the giving way of the soil outside the wall prevent us from discovering the mode of access to this tower chamber, which might also have been a reservoir for water.

From this point the wall took a direction toward the southwest angle, whence suddenly it turned eastward, still supported on the precipitous flank of the Acropolis. The southern front, scarcely visible any longer above ground, was rectilinear, without projections of any kind. This was a point at which the Acropolis dropped sheer down several metres, and this natural rock fortress is crowned with the wall of circumvallation, which at no time needed to be very high in this place.

Having reached the southeast angle, the wall skirts the great reservoir, mentioned on p. 118, above which it rears itself nearly 5 m., presenting a face overlaid with large and fine slabs and blocks of *poros*, as well as architectural elements of the most varied kinds, not to mention fragments of inscriptions. Scarcely past the grand reservoir, the wall continues along the eastern side of the hill with a broken line, somewhat drawing inward (see Fig. 3), until it comes round to the northeast front, whence we started.

In this portion of its course the wall of circumvallation presents neither towers nor other works of defence, but is, in almost all its parts, composed of a double line, one lower than the other, as if intended for additional support, carefully built with blocks of equal dimensions; these were apparently terrace walls of the good Roman period, used later to strengthen the wall of circumvallation, and can be easily followed, although scarcely above ground, and almost everywhere built,

especially the exterior portions, of handsome stones of regular cut and arrangement.

Though it is possible to follow nearly the whole circuit of the wall, it escaped me where the gate of access to the enclosure defended by that wall could have been placed, especially as no traces remain anywhere of works for the defence of a gate; still, I am inclined to think, from reasons I shall give later, that the entrance was from the southern side, by means of an inclined plane cut in the rock itself. Similarly, the special provisions for defending the wall escaped me, such as the path for the patrols and the parapet, since along the whole line of circumvallation the upper portions are utterly lost.

The line of the walls having been examined, it remains for us to consider somewhat more fully their construction and plan, that we may arrive, if possible, at a conclusion as to the epoch when these walls were erected. As I was able to remark in the portions of the line still preserved,—for example, on the north front or at the square tower, or in the front above the grand reservoir,—the wall was composed, according to what we see in a great number of ancient buildings, externally, of large and coarse materials irregularly arranged, while the internal portions consisted of stones carefully cut and well placed, which, from the steep declivity of the ground, are nearly always out of sight. The kernel of the wall is composed of an *emplecton*, or rubbish-work of the most ill-matched elements,—pebbles, stones, broken pieces of marble and pottery, architectural fragments,—all bound in abundant and exceedingly viscous mortar (Fig. 25). This mortar is so strong that not only has the *emplecton* resisted in places where the whole external facing has been broken off, but also where the lower courses are wanting, some of the stones are actually held together by the mortar itself. This *emplecton*, unlike the method followed in the edifices of the best Roman period,—a splendid example of which outside Rome remains in the *Cinta Augustea* of Turin (*Augusta Taurinorum*),—is not regularly laid in strata, divided

by courses of stone or bricks which serve to bind the wall, as in the walls of the theatre of the "Vigles," in the greater part of the Roman buildings at Gortyna, and elsewhere,¹ but it forms a whole compact mass, as in the walls of Pergamon and other cities of Asia Minor.² In this body, which was naturally formed by degrees as the two facings rose, there is now and then some great block of the external covering which penetrates inward more than the rest, thus serving to

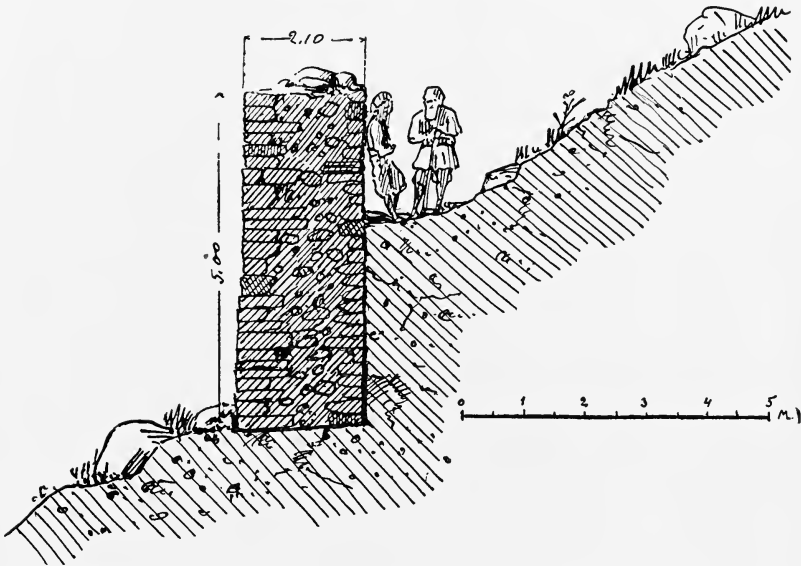


FIGURE 25.—SECTION OF THE CIRCUIT WALL OF THE ACROPOLIS.

bind and consolidate this *emplecton*, on which depended the greater resistance of the wall.

The two spaces in which are still preserved in great part the facings or coatings, are the north front and that of the west; but also in other points of the circumvallation the process is manifest of applying to the outer side of the wall all the larger blocks of stone which we had the fortune to find in the Acropolis itself. And that all these were material de-

¹ Durm, *Handbuch der Architectur: die Baukunst der Römer*, pp. 140 ff.

² Fabricius, 'Eine Pergamenische Landstadt,' *Athen. Mitth.* XI, p. 6.

rived from other buildings can be seen, not only from examining all their elements and architectural fragments, but also from the fact that the greater number of the stones, also on the sides built up in the wall, presented that beautiful warm tint acquired by this stone in the sun's rays, which could certainly not have been the effect of its long sojourn in the inside of the wall of circumvallation.

Examining one portion of the line of wall where the facing is most preserved, as on the east side near the reservoir (*piscina*), we perceived, among the other architectural elements there walled in, a great block of *poros*-stone, constituting the roof of a small *aedicula*. As it was split in two, the section was visible which presented the form of the tympanum, with an elegant profile; at a little distance were met with pieces of little fluted columns of the same material belonging, probably, to the same *aedicula*. Embedded in the same wall near the vertex of the triangle I found a terminus, or cippus, in *poros*-stone, which bore on its surface some signs scratched with the compass about which I cannot decide whether they were the work of some idler or of an architect. Thus, also, near the northeast angle of the Acropolis, I found a fine fragment of the frieze of a Doric cornice, perhaps belonging to the same edifice, with its *guttae* well preserved, with its lions' faces sculptured in fine work, which I here present, along with the Latin inscriptions, in Fig. 26. And likewise continuing along this east front and the north front of the circumvallation, it was easy to distinguish amongst the walled-in masses the various portions, — almost the *disjecta membra* of other monuments, — so that we are induced to think that the builders of this line of walls, like the engineers of Aurelian at Rome, made up their minds to use for their works of defence whatever material came to hand from the demolition of the buildings in their way as they traced the line of wall, thus saving themselves the carriage of bricks and stones from a distance. This remark, made by Lanciani and others as regards Rome, is equally applicable to the Acropolis of Gortyna, and it may per-

haps assist us in imagining for the construction of this modest work of defence a cause not less urgent and terrible than that which counselled the provision of Aurelian with respect to the capital of the Empire. We are therefore very far from the epoch in which Gortyna could aspire to the Homeric title of *τειχίεσσα*; instead of that we are in an epoch of great decadence, contemporaneous with, or perhaps subsequent to, the fall of the Roman Empire. This is confirmed also by the presence of the epigraphic material which I could discover shut up in the walls, and which, perhaps, is but a small portion of what still remains hidden there.

The epigraphic fragments found in various places on the walls, or enclosed within them, are the following, which I here reproduce,—although insignificant for the greater part,—in order that they may throw some light on the question.

(1) In the eastern wall, near the *piscina*, a block of *poros*-stone, irregular in shape and the surface much corroded, about 0.50×0.60 m. in dimensions, has these letters, 0.15 cm., much erased:



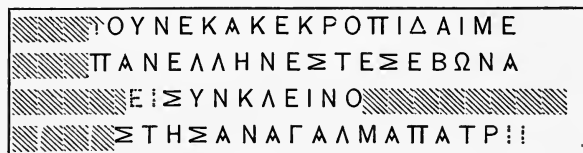
(2) Fragment of a *poros*-stone slab decorated above with an elegant module, in which were traces of a colored ornament in azure and brown (perhaps once red). This fragment was a portion of a sepulchral monument, and measures 0.32 m. high, 0.72 m. long, 0.26 m. in thickness; the letters, elegant, apicated, and well cut, are 0.042 m. high, and show traces of red coloring.

Δ Ε Ι Ν Ο Κ Λ Η
Ξ Ω Μ Ε Ν Ω

Δεινοκλή[ς] | Σωμένω

It was walled in on the north front of the circumvallation.

(3) Walled into the north front near the northwest angle is the following block of *poros*-stone bearing part of a metrical inscription. The inscribed face of this block measures 0.92 m. in length and 0.35 m. in height by a thickness of more than 0.60 m. The letters, partly obliterated, have the height of 0.055 m.



We have here what remains of a dedication of an agonistic subject, in three hexameters and one pentameter. I am indebted to Professor Comparetti for much light on the fragment and for the restorations here offered. The inscription treats of a certain Sebon, who was proclaimed victor in the public games at Athens (and elsewhere), and, perhaps, at Olympia, in Pan-Hellenic contests. It is impossible to determine in what special events he was victorious, — whether in wrestling, in the pancratium, or in some other event, — and I cannot therefore attempt definitively to restore the first two verses. The second and third verses are so mutilated that they afford even less; we do not know whether the subject of *στήσαν* is *Κεκροπίδαι*, *Πανέλληνες* being in a different sentence. As a possibility, the following restoration is offered:

Πυγμαχίας (?) μὲν ἀέθλων] οὔνεκα Κεκροπίδαί με
καὶ . . . καὶ . . .] Πανέλληνές τε Σέβωνα
ἀνδράσι Γορτυνίων ἄστ]ει σὺν κλεινο[μάχοισι (?)
ἐνθάδ' ἀεθλοφόρον] στήσαν ἄγαλμα πάτρ[η].

(4) Fragment of a votive altar or sepulchral monument in *poros* (Fig. 26); dimensions of the portion preserved, 0.85 m., length; 0.51 m., breadth; thickness, 0.30 m. The inscribed face presents at the top a cornice, 0.09 m. in height, and a lower one, 0.27 m. high. The stone has been sawn on

both sides; and besides that, the right side, along its whole length below the inscription, shows a concavity, about which I could not decide whether it was originally hollowed out or was due to a secondary use of the stone before its insertion



S P H I L O D E
F . E T . V I T V
A G N V S . E T . V

FIGURE 26. — FRAGMENTS FROM THE WALL OF THE ACROPOLIS OF GORTYNA.

in the wall. The letters of the inscription, originally colored in red, are in the first line 0.07 m. high, in the other two 0.06 m.

This inscription is too fragmentary for restoration. The form of the letters, traced with singular elegance and care, seems to belong to the epoch between the Antonines and the Severi.¹

¹ Hübner, *Exempla Script. Epig.* fig. 79 seq.; Cagnat, *Cours d'Épigraphie Latine*, 3d ed. pl. i.

These fragmentary inscriptions, insignificant as to their contents, offer us a *terminus post quem*: we may maintain that the circumvallation about which we are occupied must be ascribed to an age posterior to that of the Severi; and, as we may suppose, to a time when the monuments of the Greek and imperial epochs were either already in ruins,—or were, for some serious danger, or necessity of defence, thrown down to furnish material for the defenders of the Acropolis.

In my opinion, this second hypothesis is the one to be preferred, because the material employed does not seem to have suffered from atmospheric action, except on the face exposed to the sun in its original collocation. Another proof of the haste in which the work of demolition was carried on, along with the construction of the line of circumvallation, we have in the fact that many masses forcibly disjoined from their neighbors still preserve, in the appropriate hollows, the bronze clamps which united the blocks. It was the search after these bronze clamps, practised in epochs of great public distress, which caused the demolition of so many ancient buildings.

And the occasions of threatened invasion, and consequent terror to the inhabitants of Gortyna, must have been frequent during the decline of the Roman Empire and under the Byzantine rule. Perhaps some more precise indications can be furnished us from considering the circumvallation itself.

In fortresses of the good Roman period, situated upon mountain summits, we see the tendency to follow with the *vallum* (or trench) the circuit of the hill, in such a way as to have an irregular line of wall, and not in conformity with the traditional Roman type of the *castrum*; here, however, in the Gortynian circuit of walls, we see applied several principles which are not found in towns belonging to the Greek and Roman world save at a given epoch and after contact with a determined military civilization.

The broken lines, the acute angles destined to render less extended the rectilinear lines of the circumvallation, belong to

the inheritance of military art in the Greek cities from their earliest origin.

Setting aside the numerous proofs furnished by the excavations of the Mycenaean acropoleis of Tiryns, of Mycenae, of Troy, of Gha near Lake Copais, — we can multiply the comparisons of Hellenic and Hellenistic epochs; broken lines are those of the fortifications of Athens, of Colophon, of Notion,¹ of Iasos.² Similarly very frequent is the application of the rectangular projections or towers, advancing more or less beyond the line, which are principally directed to strike the flank of the enemy advancing toward the foot of the wall. It is the system of all the Greek and Roman fortifications which we find applied in the defences of the colonies and of the various *limites*, and which takes its full development in the Aurelian walls and in those of Constantinople; where indeed the number of such rectangular projections or towers becomes exceedingly great.³

But the spur or polygonal bastion, dominating the weakest part of the Acropolis, is a fact less in keeping with the Graeco-Roman provisions of defence—a fact in which we already find implicated the principle of abolishing dead angles, which is a principle exclusively oriental. The polygonal form which allows the defender to fight the enemy at all points, whether front or flank (according to Dieulafoy), we have to recognize at a very remote period in Assyria, a country of almost exclusively military civilization, whence it must have passed into all the countries anciently in contact with her. It is through this Assyrian influence that Dieulafoy explains some fortresses in the Upper Nile Valley, which at first sight would seem to belong to the post-Roman or Caliph era, so much do they resemble our fortifications of Gortyna; but which instead must be ascribed to the conqueror of the Assyrians, Tuthmosis. This principle

¹ Schuchhardt, 'Colophon, Notion, Klaros,' *Athen. Mitth.* xi, p. 402.

² Fried. Walter, 'Iasos,' *Athen. Mitth.* xiv, p. 137, figs. 1-4; Curtius, *Stadtgesch. Athens*, pl. iv.

³ Lanciani, *op. cit.*, p. 68; Texier-Pullan, *Byzantine Architecture, Military and Domestic Arch.*, pp. 23-54.

of defence passed later on from the Assyrians to the Persians, and from these crossed to the Parthians and the empire of the Sassanides; then reached the Second Persian Empire, which transmitted it to the Byzantines. And the Byzantines, together with the other principle of multiplex lines of defence,—of deep, wide trenches,—applied widely the precepts of the military art learned from their terrible adversaries, in all those military

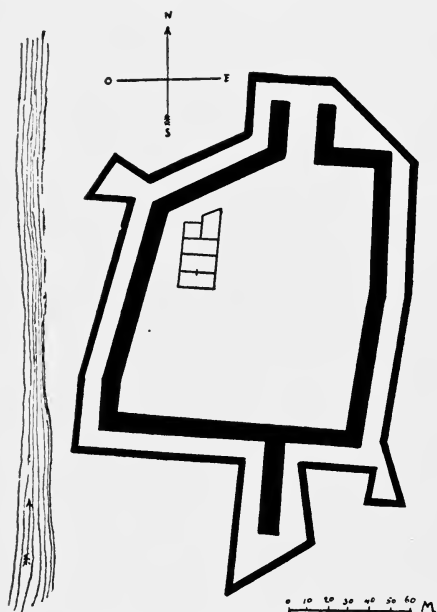


FIGURE 27.—PLAN OF THE FORT OF KOU-MEH IN EGYPT. (FROM DIEULAFOY, *Acropole de Suse*.)

works which, beginning with Justinian, the various emperors of the East initiated not only along all the frontiers of the Danube, Caucasus, the Euphrates, but in all the greater centres of the vast and declining Roman dominion. The fortifications of Trebizond, of Nicaea, of Thessalonica, of Constantinople,¹ show a step in advance compared with those of Rome, and present, instead of the jutting-out round towers, and the sharp angles, the principle inherited from the Persians to multiply

the lines of obstacle to the assailant, to abolish dead angles where the enemy with slight loss could effect the approach to the walls.²

So that, admitting these considerations, suggested to me by Dieulafoy's important work upon Persian military art and the

¹ Dieulafoy, *L'Acropole de Suse*, pp. 202, 232, 442; Texier-Pullan, *Byzantine Architecture*, pp. 23, 24.

² Dieulafoy, *Château Gaillard, etc.*, p. 352; Choisy, *Hist. de l'Architecture* (Paris, 1899), I, pp. 147 ff.

influence it exercised upon neighboring nations, we can fairly ascribe this fortification of Gortyna to the times when the terrible incursions of the Scythians and Persians became general along the frontiers of the empire, and Justinian gave orders for the fortifying of all the strong places; but the imperial troops not sufficing to defend such an extended line, territorial militia were created who had the charge of fortifying and defending the internal cities of Greece, the islands, Asia Minor, and the Archipelago.¹ Therefore the Gortynian fortress would represent this period in the life of the Empire of the East, when the alarm spread through the city for the *urgentia imperii fata*, and they had to provide for the defence of life and property, erecting with everything that came to hand a line of defence on the summit of the hill of H. Ioannis.

But the destruction of so many buildings and monuments of the classic and Roman age for the erection of this line of circumvallation may also have been the work of the Arabs; when, the attempt against Constantinople in 674 A.D. having failed, they succeeded in surprising and occupying Crete, making of it the centre of their incursions all over the Aegean Sea.² But we must keep in mind that the Arabs, in their contact with the Persians, learned the same principles of military art,

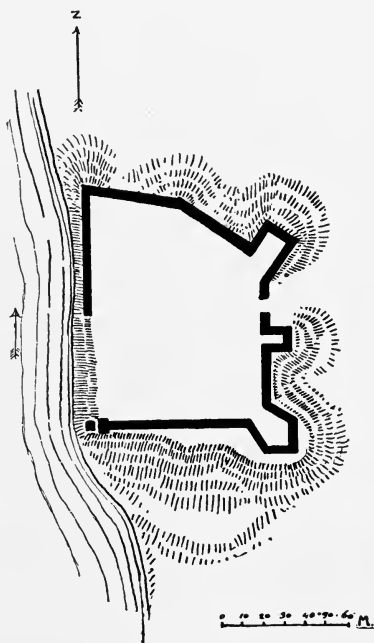


FIGURE 28.—FORT OF KOM-OMBO IN EGYPT. (FROM DIEULAFOY, *Acropole de Suse*.)

¹ Amm. Marcellinus, XVIII, 10; XIX, 2, 5, 8; XX, 6, 7; Hertzberg, *Gesch. der Byzant. und des Osmanischen Reichs*, p. 13.

² Hertzberg, *op. cit.*, p. 58.

of which the Byzantines had already taken advantage; and it is known how Mohammed, in fortifying Medina, had availed himself of the work of the Persian Selmân, and that after him all the caliphs and sultans had in their armies a corps of Persian "sappers and miners" and engineers,¹ to whose famous work are due the marvellous fortress of Aleppo² and so many others in Asia Minor, Syria, Egypt; from whom came so wide a stream of instruction to the crusaders of the West.³ The fortress of Gortyna may have been the entrenched camp of this first Arab occupation in the seventh century, unless we should ascribe it to the period of the second Arab occupation of the island, which happened during the civil war occasioned by the usurpation of Thomas (823-826 A.D.), when the Caliph Habu-Hafs-Omar, at the head of his Andalusians, occupied Crete, which became for more than a century the resort of daring Andalusian, Syrian, and Egyptian corsairs, who with their continual piratic expeditions kept up a real blockade of the Aegean. This was the period of Crete's deepest desolation; that is to say, the period when the tyranny of these brutal and warlike hordes effected the greatest diminution of the Christian population, and the widest destruction of the monuments of the Graeco-Roman and Byzantine civilization. If we think of this long, cruel period of Saracen domination, and of their desperate resistance to the attacks of Nicephorus Phocas, who in 961 won back the island of Crete to the empire, we may well imagine also that beneath these walls must have taken place some episode of that campaign which constitutes one of the greater glories of Nicephorus Phocas; and a true glory because he withdrew the unhappy island for seven centuries from the Mussulman yoke,—the terrible scourge which only recently is forever, God willing, removed from the land of Minos.

¹ Dieulafoy, *Château Gaillard*, p. 357, *passim*; Aboulfeda, *Hist. Arab. des Croisés*, p. 272.

² Girault de Pranzey, *Monum. Arab.* tom. xlviii; cf. Prisse d'Avenues, *Art Arabe*, I, vi.

³ Dieulafoy, *op. cit.*; cf. Rey, *Étude sur les Mon. de l'Archit. militaire des Croisés*, p. 47.

The elevated position of the Acropolis, protected by the wall of circumvallation, was occupied by the ruins of an imposing edifice,—ruins called by the peasants τὸ Καστρί,—and which we find summarily indicated in the view of Tournefort and in Spratt's plan of Gortyna, by the name of *guard-house* or *prison*. From the plan I here subjoin (Fig. 29), if compared with Spratt's, it is easy to form an idea how from Spratt's epoch down to our own, the building has fallen into increasingly ruinous condition, especially in its southern parts, and is now so filled up with rubbish as to render it quite impossible for the traveller of to-day to draw accurate plans or elevations of it.

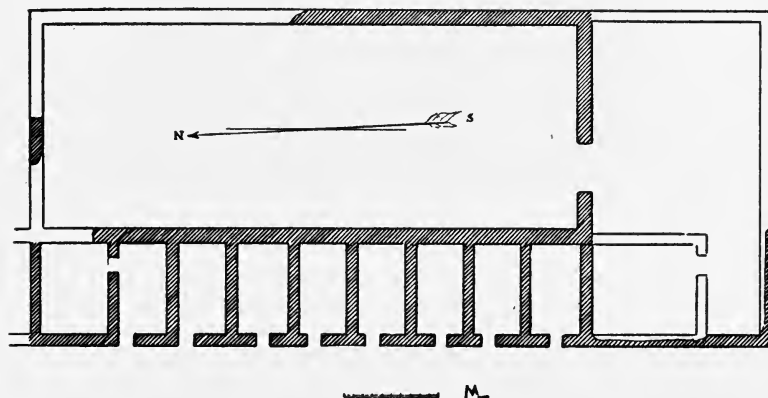


FIGURE 29.—PLAN OF THE Κάστρο ON THE SUMMIT OF THE ACROPOLIS.

The edifice, which occupies the whole southern part of the acropolis, as appears from the plan, is a spacious rectangular enclosure 59 m. in length and 24.50 m. in breadth, against which on the west and south lean other chambers of lesser dimensions, and regularly disposed. The large enclosure seemed not to have internal divisions, and included a great hall or court, surrounded perhaps by a portico. The walls enclosing it were almost entirely preserved, reaching on the west side the height of more than 8 m. from the ground. These walls, constructed with exceeding solidity and care, in the same way as we have already seen in the other Roman

buildings of the city, still show evidently their duplex coating in large bricks, which closed in the interior kernel made in strata of very solid *emplecton* or zones of *opus lateritium* (Fig. 30). The upper part of this wall seemed to offer some traces of where the vaulted roof had been attached, which covered a portico or ambulacrum surrounding the enclosure on the inside ; but it would require a more careful examination to verify all these details. The small chambers fronting the west wall of the enclosure had no communication with its interior ; but from the arrangement of the external coating of the wall of the

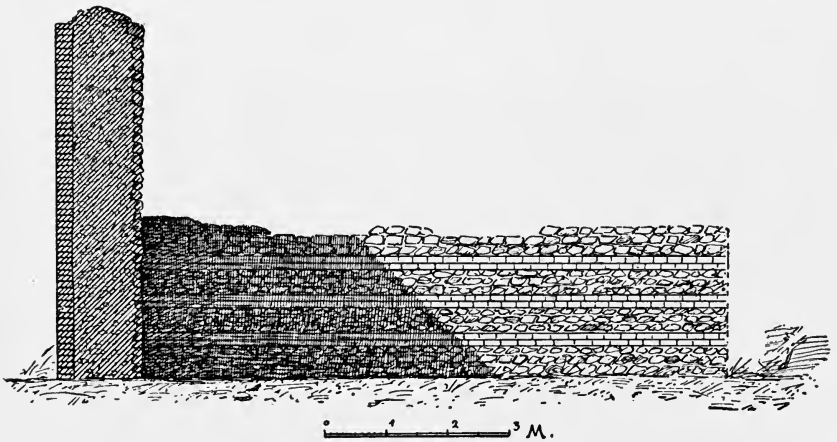



FIGURE 30. — SECTION OF THE WALLS OF THE Κάστρο on the ACROPOLIS.

enclosure it would appear that they entered into the original plan of the building ; their mode of construction, however, is rather different, since the *emplecton* constituting their wall is coated with small split stones neatly placed in regular lines, alternating with courses of bricks ; the tops, however, are in stones of greater dimensions, regularly disposed. The rooms on the west side are nine in number ; they are of the same dimensions, 9.50 m. in length by about 5 m. to 6 m. in width, preserving, however, an average of 5 m. ; they are all preserved up to the height of about 4 m. ; two only, those to the north, communicate with each other ; the others have entrance from

the outside alone, by means of doors 1.50 m. wide. It would seem that on the south side also of this great enclosure were other small rooms of somewhat more spacious proportions, which formed a kind of wings flanking the principal entrance. This southern front had a width of 16 m., and showed distinctly two halls, of which in spite of the encumbering masses of rubbish it was possible to measure the dimensions (11×9.50 m.) (11×5.50 m.), and the dividing wall was about 1 m. in thickness. The fact that the entrance to this large building was from the south side, through a spacious door 3.50 m. wide, causes me to suppose that the access to the Acropolis, even in an age anterior to the construction of the fortifications, must have been from this side. There are other reasons for this belief.

As to the use of this edifice and its form we can only make conjectures; the existence of agonistic inscriptions found on the Acropolis, as also the great wealth of hydraulic works, make us think of a gymnasium, with its *palestra* and its various apartments. Nevertheless, from its position, commanding not only the Acropolis, but the whole city, as also from its plan and structure, the hypothesis may be perhaps preferable which Spratt suggested; namely, that this edifice might have been the *statio* of the Roman garrison of Gortyna. Evident are the analogies with the internal buildings of the Castro Pretorio at Rome; but still more so with the stations of the various cohorts of the Vigili, — as that of the seventh cohort in Trastevere or of the fifth on the Coelian, and of the sundry other military bodies encamped in the city, such as the *Equites singulares*, or *milites peregrini*, etc.

It is indubitable from its structure that the building is Roman, and that it was in use until a late period is deduced from the fact that in one of the rooms on the western side, where are traces of a later restoration, we found some inscribed fragments of stone, which were used as material for reconstruction. The inscriptions on these stones are given on the next page, though little can be made out of them.

(a)  Γ
 Ε Ν Θ
 Θ Ε Ψ
 Χ Ρ Υ C Ε
 Τ Ρ Ι Α

Fragment of calcareous slab, 0.35 ×
 0.38 m. Letters 0.04.

(d) \/
 Ε Ψ
 Ε Ο

Fragment of slab, 0.25 × 0.15 m.
 Letters 0.04.

(b) Δ Α Μ Α C C Ο Ι '
 Η C Ε Ι Χ Ε
 Ι Ν

Fragment of slab, 0.32 × 0.20 m.
 Letters 0.04.

(e) 
 Ρ Η Τ Ι Α
 Ε Ζ Ε Φ Η
 Ψ C Ι Α

(c)  C 
 Ν Ι Κ  C Α C

Fragment of slab. Letters 0.04.

Δ
 Fragment of calcareous slab, 0.40 ×
 0.23 m. Letters 0.04.

These fragments, of slight importance in themselves, are only interesting as showing that at an already advanced epoch, the edifice, repaired, still served for some purpose. Probably even after the erection of the line of circumvallation, the building, situated in such a dominant position, and so solidly constructed, continued in its military uses, and was occupied by the garrison of the little fortress to which was entrusted the defence of the sinking metropolis.

III. SEPULCHRAL CELL ON THE ACROPOLIS

Before leaving the Acropolis I must mention a building situated on its western declivity, some 30 m. lower than the line of the wall. This is a small sepulchral cell of rectangular form, covered with a vaulted ceiling, of which I give here a plan (Fig. 31). It is 2.40 m. in length by 2.10 m. in width, and was entered by a flight of steps. The side and end walls, coated in bricks, presented three *arcosolia*, each protecting a funerary niche 1.60 m. wide and about 0.50 m. deep, and the

thickness of the *arcosolium* 0.30 m. The spring of the ceilings which covers the cell is of 1 m., and the vault rests upon the two lateral walls slightly above the extrados of the two *arcosolia*, and the post of the arch is marked by a little band of bricks projecting. In the end wall, above the *arcosolium*, below the ceiling, is a rectangular niche of 0.40×0.45 m. and 0.30 m. deep. The arched ceiling is constructed of splinters of stones and much mortar. We remark that at the four sides there are four pipes of terra-cotta and *amphorae* (long jars), which cross the massive ceiling, these latter destined to lighten the weight of it, and the former to ventilate perhaps the *hypogaeum*. While the lateral and end walls are built of fine brick work, although with a plentiful proportion of mortar, the entrance wall is constructed in stones of various sizes and all derived from demolished buildings, from which we may infer that the question is here of a restoration, or a subsequent readaptation of the funerary cell. The small entrance door, 0.60 m. wide, has a stone architrave, and has two little niches, one on each side, and not very deep; the ancient access to the *hypogaeum* was by means of a little staircase now completely buried; one to-day enters through a breach made in the front wall by the seekers after treasures who have completely rifled the tomb of all its ornaments and other contents.

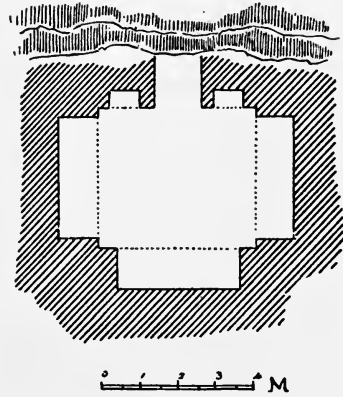


FIGURE 31. — TOMB OF ROMAN TIMES ON THE ACROPOLIS.

IV. ROMAN TOMB IN THE PLAIN

Another tomb of the Roman age, very similar to this of the Acropolis, was examined by Professor Halbherr and by me in the plain at some distance from the high hill of H. Ioannis.

In the course of my researches upon Gortynian topography, we were informed of the discovery of this tomb, which is not very far from the Lethaeus, on the road leading from H. Deca to Mitropolis, and about ten minutes from the *Megali Porta*. The locality where this tomb is situated, though included in the space attributed to the city of Gortyna, did not lead us to expect any group of ruins, although the boundary walls of the cornfields consisted entirely of ancient fragmentary material.

The tomb then was not surrounded with habitations, nor was it at the same time isolated. Although here, as elsewhere, systematic examination was impossible for me, I found, nevertheless, evident traces of other tombs, such as fragments of sarcophagi, of plain stone coffins, found and broken by the peasants in field-labor or in searching after treasure.

This tomb also had been greedily rummaged in hopes of treasure; but when I saw it, it was still possible to take the sketches I add herewith, and which permit me to describe it more succinctly. (Fig. 32.)

The tomb was a little subterranean cell of rectangular form 3.20×2.80 m. and about 3 m. in height, and was entered by a staircase on the south 1.20 m. wide. It was constructed almost entirely in bricks, somewhat roughly, and embedded in a quantity of mortar; it was, nevertheless, so solid as to come down to us almost intact. The sepulchral cell was covered by a high arched ceiling, about 1 m. high from the spring, marked by a very simple cornice of two courses of projecting bricks. The axis of the ceiling was from south to north parallel to the two longer sides, and its section was scarcely less than circular. As is apparent from the accompanying drawings, the three walls of the cell placed at the sides and opposite the entrance wall, had each a large niche filling it almost entirely. This niche, nearly 60 cm. in depth, indicated that the thickness of each wall exceeded 1 m.

The niches were covered by an *arcosolium* very well constructed and resting upon two broad bases limiting the lower

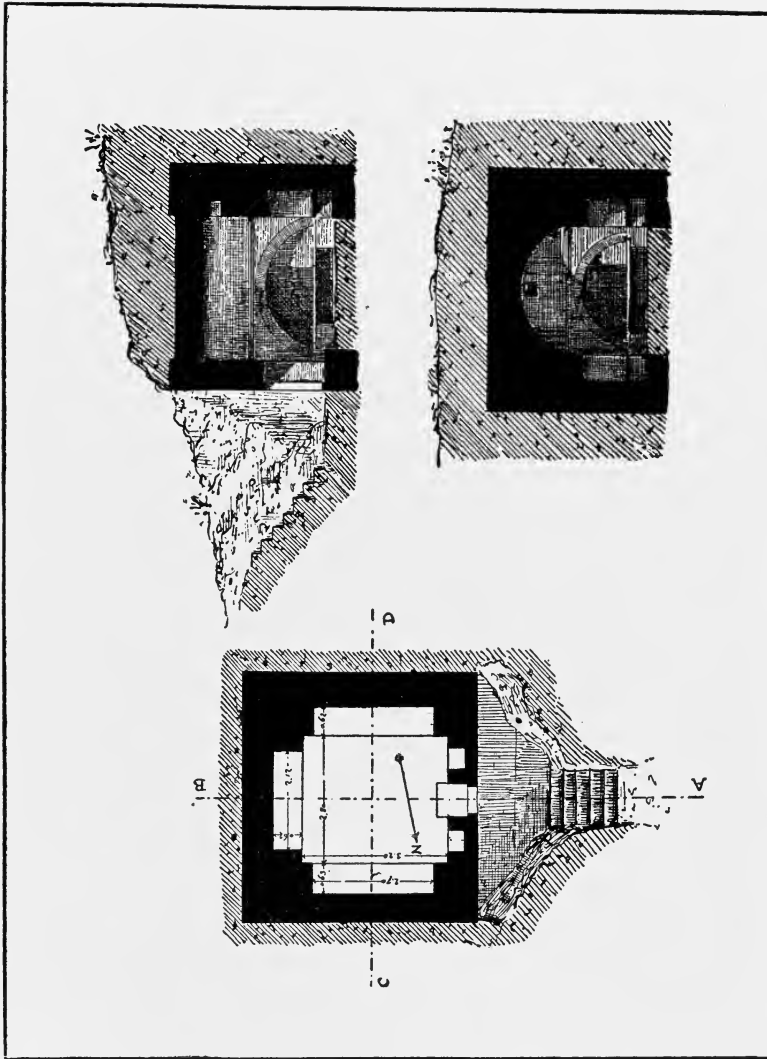


FIGURE 32.—ROMAN TOMB AT GORTYNA. THE UPPER RIGHT-HAND PLAN GIVES SECTION AB; THE LOWER, SECTION CD.

part of the niche itself. It was thus divided into two stories, each one forming a funeral couch. The upper one, formed of a slab of fine *poros*-stone from the labyrinth, beautifully levelled, and about 0.20 m. thick, rested upon the bases of the *arcosolium*; the height of this space reserved for the upper story of the niche was 1.05 m. and the width about 2 m., and was given by the development of the *arcosolium*. More limited was the lower story, only 1.65 m. long and scarcely 0.40 high. The bottom of this lower bed was on a level with the floor of the cell, but divided from it by a slight kind of threshold in stone. In the entrance wall, on each side of the door, was another niche in the thickness of the wall, about 0.40 m. from the ground, 0.80 m. high, 0.60 m. wide, and 0.40 m. deep. The minor dimensions of these two niches indicate either that they were reserved for the bodies of children, or else were to contain small cinerary urns, in case the cell was to serve for successive sepulture. A little terra-cotta urn with rude ornamentation was found broken near the left niche; from its narrowness and its height, it indicated much more a cinerary urn than a receptacle for a child's body. The floor had been paved with slabs of stone, but they had all been taken up by the profaners of the grave, in the hopes of finding objects of value or coins. In stone were also the doorposts, the threshold, and architrave. It is impossible to say whether the door had also consisted of a stone slab, turning on hinges or was simply walled in; thus also, the internal dispositions for the dead remained quite unknown to us, nor could we discover whether sarcophagi had been placed in the three large upper niches, or whether the dead had been simply deposited in them and walled in with slabs as in the lower *cubicula*. No trace remained to throw any light upon these particulars, nor could we hear anything as to the objects found in the tomb from the proprietors of the place.

Similarly every epigraphic indication is wanting, both within the tomb and externally: it is not, however, difficult to judge of the age of this subterranean cell from its style of con-

struction, on technical Roman lines, since the whole plan and profile of it are perfectly similar to other *hypogaea* existing in the island, such as those of H. Thomas and of Priniá. The tombs of these two localities are completely excavated in the rock, a calcareous Tertiary of very easy excavation; whilst, on the contrary, in the alluvial plain of Gortyna, the sepulchral cell had to be entirely constructed of strong masonry in brick and stone. As Halbherr and Mariani have ascribed the above-mentioned tombs of H. Thomas¹ to a late Greek and a Roman epoch,—I also am of opinion that to the same period may be ascribed these, our tombs of the plain, as well as that of the Gortynian Acropolis, which reveals very plain characters of a greater decadence.

In accordance with the ancient custom of burial near and along the public roads, it is probable that such a road passed near the little cell, but no trace of it remains visible. If not difficult to fix approximatively the epoch of this tomb, its location, however, remains a puzzle, because there is no doubt that it is within the area of the city itself. And the existence of a tomb, or perhaps even a group of tombs of the Roman epoch placed so near the dwellings of the living, is in direct contradiction to all we believe we know about the hygienic and funerary rules of the same age. Let me be permitted, however, to make an observation upon this subject, suggested to me by examining the ruins of Gortyna. Whoever makes a hasty tour through the zone extending around the Acropolis of H. Ioannis, comprising the fertile plain which extends from H. Deca as far as Mitropolis and Ambeluso, and then takes a southern direction almost to Choustoulíanà, will see how it is sprinkled all over with ruins; some still imposing, like the *Megali Porta*, the amphitheatre, the so-called Praetorium; others scarcely indicated by a few traces hardly above ground,—and will easily be persuaded that the whole

¹ Halbherr, *Museo Italiano*, III, p. 687. Mariani, *Monumenti antichi*, VI, p. 332, fig. 88. I myself maintain elsewhere that the tombs excavated in the rock near Priniá (Malevisi) are of the Roman age.

of this space was once, without interruption, occupied by the city.

This being the case, we should have a city four times larger than the Candia of to-day, and should be forced to admit a population numerous in proportion to the means of the valley in which Gortyna rose, and to the character itself of the region whose capital she was. Hence, according to my conception, at the Roman epoch, the city must have been much more populous than earlier; and according to the rules of comfort and ease prevailing in the dominating race in an epoch of profound peace, it was surrounded by gardens and groves which rendered more endurable during the hot season the residence in that sunny plain. The interior of the city would also abound in free spaces, well-planted and watered, the better class of dwellings grouped about the temples and other public edifices. Nor would tombs be wanting in these spaces, even in the times when hygienic and civic prescriptions were most respected.

Later still, then, and contemporaneously with the progressive diminution of the population which accompanied and characterized the decay of the Roman power,—the anaemia, as it were, of a once vigorous body,—the inhabited quarters of Gortyna gradually became less populous, they shrank away, as it were, from each other slowly but continually; and whilst the later inhabitants of Gortyna drew together about the Acropolis and upon it, the insecure and perhaps already unhealthy plain became by degrees a desert; and amongst the ruins of its edifices, speedily invaded by the insolent vegetation, rose the poor chapels and modest sanctuaries of the New Faith—sanctuaries around which, as centres, grew the present villages that occupy the once famous area of Gortyna.

Besides these few buildings on the Acropolis and in the surrounding plain, I was able to examine some other ruins in the course of my peregrinations through the country during my not brief abode in H. Deca; but partly from the very dilapi-

dated state of those ruins, and partly from the impossibility of making at the moment detailed excavations, I fear my later notes would be still more imperfect than those already published. I therefore bring these memoranda to a conclusion, fervently hoping that the miserable conditions of that noble country being at last remedied forever, it may be possible to resume and bring to a successful issue an exploration which I do not doubt will be fruitful in important and satisfactory results.

ANTONIO TARAMELLI.

TURIN, 1899.

ARCHITECTURAL REFINEMENTS IN ITALIAN CHURCHES¹

IN 1895 the Brooklyn Institute of Arts and Sciences authorized and supported, on behalf of its then projected and now existing Museum, the making of a series of architectural surveys of Italian mediaeval churches and cathedrals. It was the purpose of these surveys to continue an investigation which had been originally undertaken in 1870, the results of which were published four years later.²

The publication of 1874 was generally limited to Pisa, but was of such a character as to preclude the idea that the phenomena described could have been locally limited to that town. It announced as constructive refinements a series of inconspicuous curves, obliquities, and asymmetrical measurements in the main lines and surfaces of the Pisa Cathedral which had never been previously catalogued or described. It announced other irregularities as constructive refinements which had been otherwise supposed to be accidental — notably, the overhanging façade, which was supposed to be accidental by Mr. Ruskin.³ A system of illusion in perspective was also announced as having been employed at Pisa, notably in the interior of the Cathedral, and in the Church of S. Stefano, outside the walls, where this system was first observed.

¹ The matter of this Paper was laid before the annual meeting of the Archaeological Institute, in New York, December 27, 1901. The illustrations are accurate pen-and-ink drawings from photographs of the Brooklyn Institute survey of 1901, which were shown at this meeting.

² *Scribner's Magazine*, August, 1874, 'A Lost Art,' by W. H. Goodyear.

³ *Seven Lamps of Architecture*, 'The Lamp of Life,' p. 158 (Sunnyside ed., 1880).

This publication had thus catalogued a series of constructive variations in measurements, dimensions, and alignment, of a much more varied, more extended, and more persistent character than those which had been noticed by Mr. Ruskin in the *Seven Lamps of Architecture* and in the *Stones of Venice*. The latter were limited to variations of intercolumniation or of arch construction.

These various announcements tended to establish a new point of view in the study of mediaeval architecture and to vindicate for some of its monuments a quality of subtlety which had so far been considered to hold only of the temples of the Greeks. The original advice to publish was given by Jacob Burekhardt, then of the University of Basle, and during his lifetime the leading German authority on the general art history of Italy. He personally assured the writer of his ignorance of the facts which had been discovered; and that these facts were not then known to other students of mediaeval architecture is attested by the standard publications of that date, as well as by others which are much more recent.

The Brooklyn Institute surveys of 1895 covered a period of six months, and included observations in all the well-known cathedrals and churches of Italy, as well as in many of the minor churches and in some rarely visited localities.

A very considerable number of churches and cathedrals were found to have no subtleties of construction. The individual mention and cataloguing of the buildings which are destitute of refinements will be one of the matters for publication in a book which is now in preparation and for Memoirs which have been announced by the Brooklyn Institute Museum. These publications will have the importance of showing that the less pretentious or more roughly and carelessly built churches are those generally destitute of refinements. In other words, the well-known and very prevalent irregularities, which are due to the use of heterogeneous materials from ancient buildings, or which are due to indifference to regularity and to rough construction, are insufficient explanations of the phenomena.

Many of the positive results of the surveys of 1895 have been published in the *Architectural Record Quarterly Magazine* (1896-1898).¹

In the summer of 1901 these investigations were continued, with results which it is the design of the present article to summarize. The expense of this work was supported by a contribution of \$500 from Mrs. August Lewis, of New York, who had contributed the same sum toward the surveys of 1895. These had been otherwise supported by a contribution of \$1500 from the Brooklyn Institute and by a contribution of \$1500 from the writer.

The special purpose of the visit to Italy of 1901 was partly to submit the phenomena, already announced as existing in St. Mark's at Venice and in the Pisa Cathedral, to the engineering architects at present in charge of those buildings and to obtain their verdict on the constructive facts. Their certificates are appended (pp. 195, 196). Another purpose of the trip was to obtain photographs and measures, and to make more careful record, of some important facts which were insufficiently substantiated.

The remarkable discovery had been made, in 1895, that delicate architectural curves were occasionally constructed by the mediaeval Italian builders, of a character which suggested a traditional inheritance, possibly through Byzantine sources, from ancient Greek art. These more delicate curves were not discovered in 1870, although there are many of them in the Pisa Cathedral. The suggestion of a historical connection

¹ Vol. VI, no. 1, 'Optical Refinements in Mediaeval Architecture'; vol. VI, no. 2, 'Perspective Illusions in Mediaeval Italian Churches'; vol. VI, no. 3, 'Constructive Asymmetry in Mediaeval Italian Churches'; vol. VI, no. 4, 'A Discovery of Horizontal Curves in Mediaeval Italian Architecture'; vol. VII, no. 1, 'A Discovery of the Entasis in Mediaeval Italian Architecture'; vol. VII, no. 2, 'An Echo from Evelyn's Diary'; vol. VII, no. 3, 'The Problem of the Leaning Tower of Pisa.'

See also vol. IV, no. 4, 'A Discovery of Horizontal Curves in the *Maison Carrée* at Nîmes,' and vol. IX, no. 1, 'Horizontal Curves in Columbia University.' The Smithsonian Reports for 1894 have republished the article on the *Maison Carrée*. See also the *American Journal of Archaeology*, First Series, X, no. 1.

with ancient Greek art through Byzantine sources was, however, originally made in 1874. The peculiar character and use of these curves were of such a nature as to react on some of the explanations which have been in vogue regarding the Greek curves, so as to suggest a preference for some of these explanations as compared with others.

A peculiarly important instance of constructive curves had been surveyed and photographed in 1895, at Bologna, in the twelfth century Cloister of the Celestines. The negatives

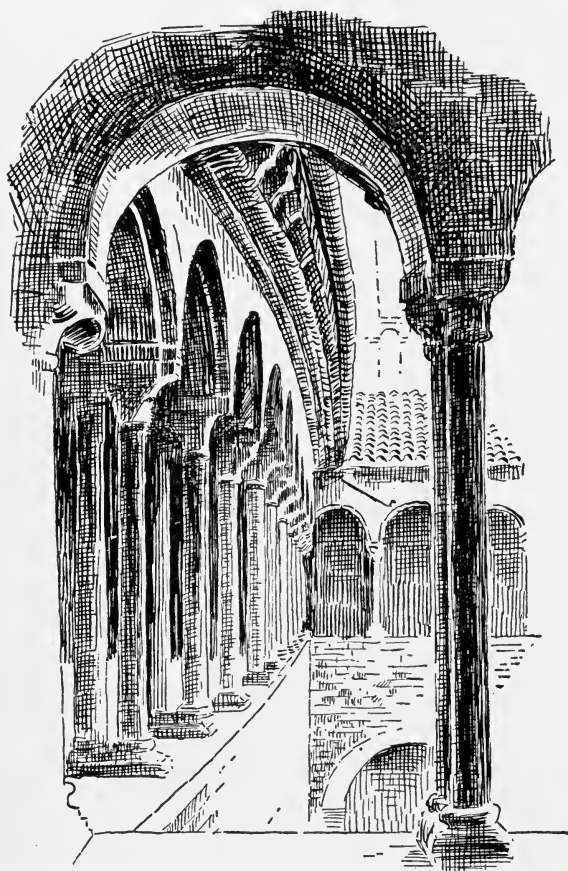


FIGURE 1.—HORIZONTAL CURVES IN PLAN, IN THE CLOISTER OF THE CELESTINES AT BOLOGNA.

(Drawing from a Brooklyn Institute photograph.)

were, however, broken in transit before prints had been taken from them. Without such photographs it was not possible to give convincing publicity to this discovery. In 1901 new photographs were made on all sides of the Cloister of the Celestines, some of which are published herewith (Figs. 1

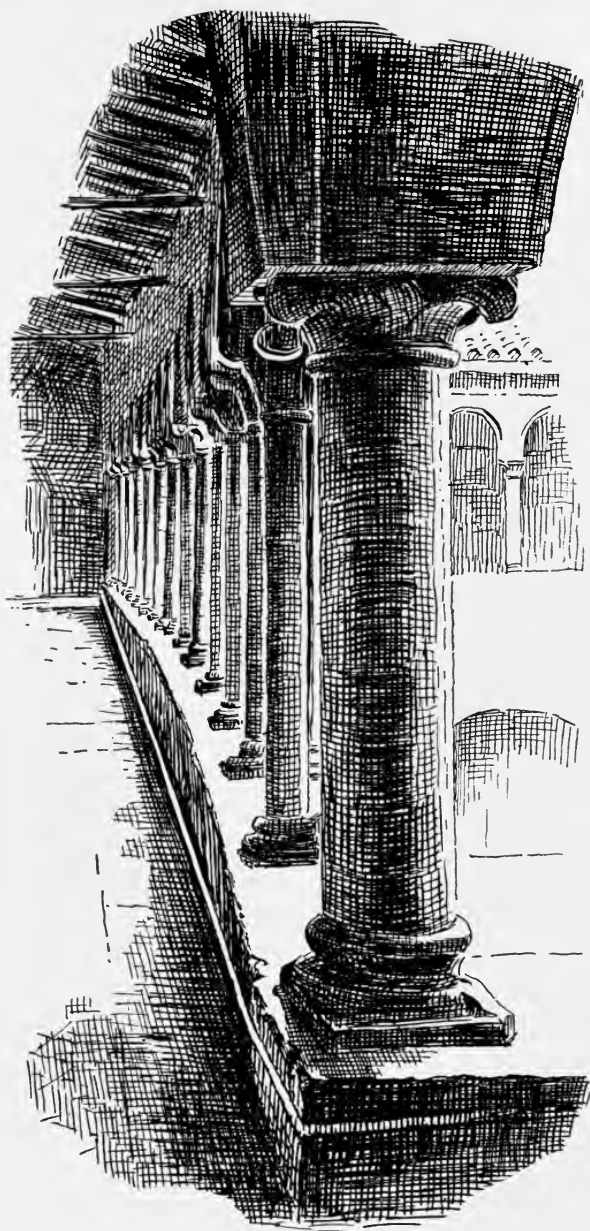


FIGURE 2.—HORIZONTAL CURVES IN PLAN, IN THE CLOISTER OF THE
CELESTINES AT BOLOGNA.

(Drawing from a Brooklyn Institute photograph.)

and 2). The curves appear much stronger in the photograph than they do in the building, where they are so discounted by the eye into ordinary effects as to be inconspicuous. The arcades of the cloister are about fifty feet in length on each side. The amount of the curve, which is practically uniform on all sides, is about five inches on each side, as measured on the parapet of the second story. There

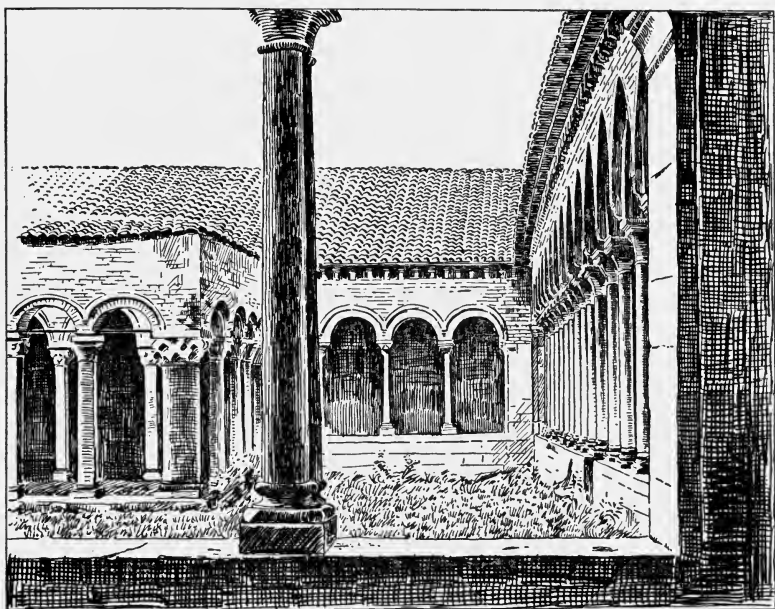


FIGURE 3. — HORIZONTAL CURVES IN PLAN, IN THE CLOISTER OF S. ZENO AT VERONA.

(Drawing from a Brooklyn Institute photograph.)

are slight curves in the foundations on all sides of the cloister, and they are well accented in the lower part of the first story.

Another important and similar instance was also surveyed and photographed in 1901, in the Cloister of S. Zeno at Verona (Fig. 3). An observation had been previously made here by a member of our party, in 1895, but without measures or photographs.

The great importance of these instances is that they offer satisfactory proof regarding the constructive intention of the builders. The curves of the Verona cloister are uniform in measurement and character on three sides of the court. They are not found on the fourth side, which is broken by a construction projecting into the court (Fig. 3). The dimensions of the court are about 72×80 feet in the length of the colonnades. At the foundations of the parapets the curves measure on the three sides (west, south, and east), respectively, 0.12, 0.11, 0.13 (foot decimals). At the bases of the columns they measure, respectively, 0.10, 0.15, 0.12 feet. In the cornice they measure about 0.40 feet, or approximately, five inches.

With the exception mentioned for Verona, all the sides of the cloisters at Verona and Bologna are laid out in curves which are convex in plan to the centres of the courts. Such uniformity of direction eliminates the possible objection that carelessness of construction is a sufficient explanation. Another objection as to constructive intention is occasionally based on possible settlement of foundations; but these curves are in plan, and not in elevation.

A third possible objection as to constructive intention is connected with the action of thrust from a vaulting. In vaulted cloisters the ends of the cornices are "tied in" by the resistance of the arcades where they meet the thrust of the vaulting at right angles, whereas the thrust of the vaulting at the centre is not resisted by an opposing force and there is a consequent tendency to bulge outward at this point. But at Bologna, where the cloister is two-storied, the curves begin at the foundations and in the lower walls of the building; and at Verona the curves begin in the foundations of the parapets, and they are also found in the bases of the columns which rest on the parapets. Moreover, in both cases the ceilings of the cloisters are of timber, and not vaulted. The lower story at Bologna has also timber ceiling on the side from which the photographs are taken. The three other lower stories are vaulted, but there are no curves in the inner sides of the walls. These

various facts offer convincing proof that constructive curves were employed by Italian mediaeval builders, and it is self-evident that they must have been employed with an aesthetic purpose. The question as to what this aesthetic purpose was, can hardly be considered debatable when the following facts are considered.

In both cloisters the effect of the curves must be considered as intended from the standpoint within the cloister corridors, as well as from the standpoint in the court. In the corridors the curves are concave to the eye, but they are seen both in the lines above the level of the eye, and in the parapets below the level of the eye. Optically considered, the effects tend to be translated by the eye into the effect of curves in elevation. Concave curves above the eye appear to be descending curves in elevation; *i.e.* they appear to sag at the centre; while concave curves below the eye tend to appear as rising curves in elevation. On the other hand, as seen from the court, the convex curves above the eye, of the cornices, tend to appear as rising curves in elevation; whereas, the convex curves below the eye tend to appear as curves which sag downward. Under these circumstances no theory appears tenable, excepting that the curve was preferred to the formalism and rigidity of straight lines. This is an explanation which has already appeared satisfactory for the Greek curves to many experts, notably Burekhardt, Kugler, and Schnaase.¹

Theories of a purpose of optical correction which have been offered for the Greek horizontal curves,² and to the effect that they were originally intended to correct an appearance of downward sagging, in lines which are actually straight, cannot be applied to these cloisters, because half of the curves employed actually do tend to sag, in optical effect. Hence if a historic connection with the Greek curves be admitted, it

¹ See, for instance, Burekhardt, *Der Cicerone*, p. 4.

² Penrose, *Principles of Athenian Architecture*, 1851, p. 78: "There can be little doubt that the origin of the horizontal curve was to obviate a disagreeable effect produced by the contrast of the horizontal with the inclined lines of a flat pediment."

would appear that these theories would also have to be abandoned, or modified.

Such serious objections already exist, however, to the theories of Penrose, as advanced for the Greek curves, that they appear untenable even without this new and additional argument.

For instance, the Brooklyn Institute Survey of 1895 has established the existence of curves in elevation on the sides of the temple of Concord at Girgenti, but it has also proven that there are no curves under the gables. This is apparently an unanswerable argument against the theory of Penrose that the Greek curves originated in the desire to avoid an effect of downward sagging in the entablature under the gable. It also antagonizes the view that the Greek curves were intended to correct other effects of sagging;¹ for the tendency to an effect of sagging is certainly greater under the gable than it is on the flanks of the temple. It is doubtful if such an effect exists at all on the upper lines of the sides of a Greek temple. At close range it certainly does not exist. (It has never been suggested by Penrose that it exists at all.) Other unanswerable objections to the theories of Penrose have been advanced by Dr. Guido Hauck.² This publication very effectively supplements and largely supplants that of Thiersch,³ who had already successfully shown the weak points of the theory of correction for the gable. It should, however, by no means be overlooked that Penrose must rank for all time as having by his surveys furnished the proofs for the existence of the curves in Greek architecture, although he was not the original discoverer of them. It must also be remarked that Penrose has not urged his theories as being final or as being the only ones possible, and he has himself mentioned aesthetic reasons as

¹ Burnouf, *Revue de l'Architecture*, 1875, p. 146, and Thiersch, as below quoted.

² Guido Hauck, *Die Subjective Perspective und die Horizontalen Curvaturen des Dorischen Styls*. Stuttgart, 1879, Konrad Wittwer. Dr. Hauck was in 1879 Professor of Descriptive Geometry in the Royal Technical High School of Berlin.

³ 'Optische Täuschungen auf dem Gebiete der Architectur,' in the *Zeitschrift für Bauwesen*, XXIII. Berlin, 1873, Ernst & Korn.

being probably contributory causes for the use of curves on the flanks of a temple.¹

The curves of the quoted cloisters have a remarkable analogy with those of the second court of the Egyptian temple of Medinet Habou,² but they also differ from these. Both are alike in the important point that they are in plan, as distinct from curves in elevation, and in both cases they are convex to the centre of the court. But at Medinet Habou the curves are not appreciable in the lines of the bases of the columns, and there are no parapet curves to be considered. At Medinet Habou it might easily be conceded that the effect was solely contrived for the point of view in the court, where the curves are convex to the spectator and above the level of the eye. For all such points the optical effect of the curves is equivalent to that of a curve in elevation. In the case of the cloister curves, it has been shown that they appear to be of equal importance on the concave sides as well as on the convex sides, and that they appear to be of equal importance, whether seen from above or below the level of the eye.

The remarkable ignorance of the experts who have made publications about the Greek curves, of the existence of the curves at Medinet Habou has been noted by me in another publication.² This ignorance is the more remarkable because the original discovery of the Greek curves by Pennethorne in 1837, was owing to his previous discovery of the Egyptian curves. But although the Egyptian curves were observed by Pennethorne in 1833, they were not made known to the world until 1878.³ It is easy to understand how they had not come to the knowledge of Hauck in 1879, and the publication of Thiersch was still earlier, in 1873. Penrose published in 1851.

The mere existence of these Egyptian curves is sufficient to neutralize the gable theory of Penrose. The whole argument of the important publication of Hauck is also based on the

¹ See p. 79 of his cited work, referring to the beauty of a curved line.

² *Architectural Record Quarterly*, IV, no. 4.

³ Pennethorne, *Geometry and Optics of Ancient Architecture*, 1878, p. 84.

assumption that horizontal curves were confined to the Doric style of Greek temple architecture, and his interesting argument is therefore also neutralized by the existence of the Medinet Habou curves; provided it be conceded that the Greek curves are related to the Egyptian and that some common explanation ought to be found for both.

I have previously published personal observations regarding other Egyptian curves, notably at Edfou.¹ It is probable that the curves of the Egyptian temple courts will be more carefully considered when their analogies with those of mediaeval Italy have been made apparent. The probability that the Egyptian curves were the ancestors of the Greek curves leads to the remark that the Greek curves in plan have also so far been generally neglected by experts. Jacob Burckhardt is the only critic who has mentioned the curves in plan on the flanks of the temple of Neptune at Paestum as having an aesthetic purpose.² Their existence is unknown to the work of Penrose, and is presumed to be accidental by Thiersch. These curves have been photographed for the first time by the Brooklyn Institute Survey of 1895, and there appears to be no reason for doubting their constructive character as asserted by Burckhardt. The curves of the Maison Carrée at Nîmes, which were discovered by me in 1891, are also curves in plan.³

The following points may therefore be summarized as being of importance in connection with the curves in the cloisters of Verona and Bologna:

(a) They demonstrate that architectural refinements were employed in mediaeval architecture, and that they were not confined to the Greeks.

(b) The refinements cannot have been employed for the correction of optical illusion. They must therefore represent a positive aesthetic preference for delicately curved lines as

¹ *Architectural Record Quarterly*, vol. IV, no. 4.

² Jacob Burckhardt. *Der Cicerone*, p. 4.

³ *Architectural Record Quarterly*, vol. IV, no. 4; Smithsonian Report for 1894, pp. 573-588; *American Journal of Archaeology*, First Series, vol. X, no. 1.

more pleasing than mathematically straight lines in architectural colonnades.

(c) The opinions of the German and French experts who have not favored the view that the Greek curves were originally designed to correct a sagging effect are supported by this discovery.¹

(d) The constructive curves in plan of Egyptian temple courts offer important analogies with the curves in the cloisters of Verona and Bologna.²

¹ Boutmy, *Le Parthenon et le Génie Grec*, has advocated the theory that the purpose of the Greek curves was to accent the curvilinear perspective. This contention has been much more ably and explicitly developed by Hauck. It was originally suggested by Hoffer (*Wiener Bauzeitung*, 1838), but Hoffer also considered the curves as giving life and beauty to the building and as superior to the more monotonous and colder effects of mathematically straight lines. A consensus of authorities is therefore to be noted (Burckhardt, Kugler, Schnaase, Hauck, Boutmy, Hoffer), who, though differing among themselves, still unite in not advocating the theory of correction. Reference to the theories of curvilinear perspective has been otherwise avoided in this Paper as unduly increasing its length. It must certainly be admitted that horizontal curves may have been used in different cases for different purposes both in Greece and mediaeval Italy, and there are cases of which it might be asserted that more than one purpose might be admitted. It is quite clear, however, that the cloister curves do not come inside the theories which have been advanced for curvilinear perspective.

² The twelfth century Cloister of Sassovivo, near Foligno, offers an instance of very regular and very delicate curves in plan, convex to the court on all sides.

These curves are in the upper cornice lines, and they do not appear in the parapets. As this cloister is vaulted, we cannot positively assert that these curves have not been produced by thrust. The larger cloister of the Certosa of Pavia shows very delicate curves in the parapets and in the lines of the bases of the columns. They are in plan and convex to the court on all its sides, and amount to about $2\frac{1}{2}$ inches in a length of 130 paces. They are of slightly irregular character, but are perfectly sensible to the eye. A successful photograph was made here last summer. The original observation was made in 1895. No curves are visible here in the cornice lines. In 1901 I reexamined the cloisters of St. John Lateran and S. Paolo Fuori, at Rome, which are quoted in the *Architectural Record Quarterly* (VII, no. 1). The rough work of the masonry, the possibility of thrust, and the interference of the drain pipes with the line of vision (in the case of S. Paolo Fuori) led me to the conclusion that these are doubtful instances for constructive curves. (Many cloisters were examined both in 1895 and 1901, in which the lines were quite straight, both in the cornice and the parapets.) My own doubts as to the Roman cloisters named are connected with the question whether curves in the cornice lines were not sometimes worked in by constructive leaning forward of columns near the centre of each side. If some instance of such working in of a curve was conclusively proven,

The curves in cloisters are, however, only one phase of the use of constructive curves in Italian mediaeval architecture. I have already published many of these instances, which are especially numerous in the Pisa Cathedral and in St. Mark's at Venice.¹ Those which were discovered in 1895 were not at that time brought to the attention of the architects in charge of the buildings. In 1901 I submitted the discovered facts to the engineering architects who were respectively in charge of St. Mark's and of the Pisa Cathedral, and secured from them certificates verifying the constructive and intentional use of curves in these buildings. These certificates are appended. It will appear from Commendatore Saccardo's certificate that the concave curve in plan of the façade of St. Mark's is known to him as an aesthetic device. (It was published by me in the *Architectural Record*, VI, no. 4, p. 489.) It may not be amiss to say here, that the earliest observed case of constructive mediaeval curves is in S. Apollinare Nuovo at Ravenna (sixth century).² The latest observed case of classic curves is that of the Maison Carrée at Nîmes.

The survey of 1901 was also successful in securing convincing evidence for the existence of constructive vertical curves in Italian mediaeval churches. Vertical curves are very generally exposed to the suspicion that they have been produced by thrust from vaultings or arches, because they frequently appear in the piers of vaulted churches at points where these piers are exposed to thrust from the aisle vaultings. In 1895 I had observed instances in the Cathedral of Vicenza which were not exposed to this suspicion, but the observation was hurried, and no photographs were taken. In 1901 the facts were observed with greater deliberation, and photographs were successfully made (Fig. 4).

It would react on my views about S. Paolo Fuori. There are some indications that this was done here, but the question is still in the balance. This question is also important for Sassovivo, where the columns distinctly lean outward toward the centres. The appearances here, to my observation (1895), favored the belief in a constructive lean.

¹ *Architectural Record Quarterly*, vol. VI, no. 4.

² *Ibid.*

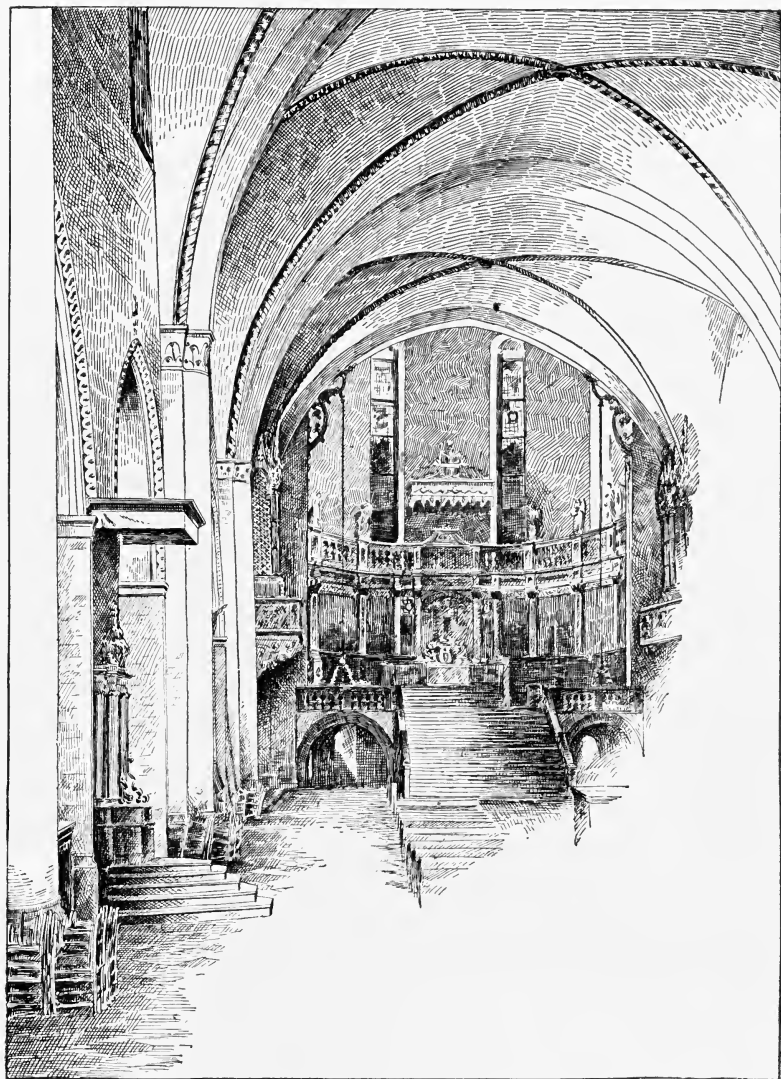


FIGURE 4.—DELICATE VERTICAL CURVES IN THE PILASTERS OF CHAPEL WALLS IN THE CATHEDRAL OF VICENZA.

(Drawing from a Brooklyn Institute photograph.)

In the Cathedral of Vicenza there are no aisles. Chapels separated by walls at right angles to the line of the nave, and about twenty-five feet deep, take their place. The pilasters, which face these walls fronting on the nave, are built in very delicate vertical curves.

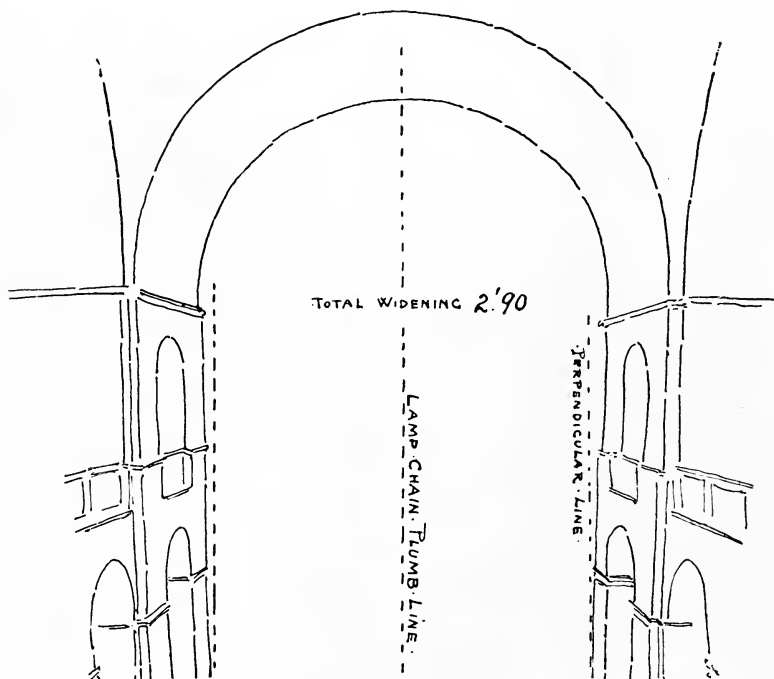


FIGURE 5.—THE OUTWARD SPREAD OF THE PIERS IN ST. MARK'S AT VENICE.¹
From the *Architectural Record Quarterly*, vol. VII, no. 2. (Tracing from a Brooklyn Institute photograph.)

An important instance of vertical pilaster curves which are not exposed to the suspicion of thrust was also surveyed and photographed in S. Paolo Ripa d' Arno, at Pisa, in 1901. It was announced in 1874, together with the vertical curves in the great pilasters at the junction of nave and transept in the Pisa Cathedral.

¹ See the appended certificate of Commendatore Pietro Saccardo, p. 195.

The survey of 1895 discovered a certain number of Italian vaulted churches in which the piers of the nave, and sometimes the exterior walls, were constructively leaned outward.¹ These leans are so delicate as to be inconspicuous, and may have had the purpose of correcting for the interior an appearance of contraction, or narrowing in, of the upper vertical lines of the church, which would be due to the natural perspective. Such inclinations are, however, so obviously liable to be of accidental occurrence as a result of thrust, or of the settlement of foundations, that any announcements of their constructive existence are peculiarly and justly exposed to scepticism. The facts are certainly very extraordinary, but all possible doubts have, notwithstanding, been removed by the observations of 1901. The engineering architect of St. Mark's has examined with me the facts as regards that church (Fig. 5), and his certificate is appended. The given device was even employed by Palladio in S. Giorgio Maggiore at Venice, and photographs have been taken in this church showing the phenomena under conditions which preclude any suggestion of thrust or settlement.

The Gothic church of S. Agostino at Orvieto has walls which lean outward against buttresses, of the same date and construction, which lean inward. These have been photographed (Fig. 6).

The Church of S. Lorenzo at Vicenza has walls which lean outward against buttresses, of the same date and construction, whose exterior lines are perpendicular. These have been photographed. The interior walls lean out not less than six inches in twenty-five feet. The walls are four feet thick, and the buttresses are three feet wide at the base.

Peculiarly important observations of the given refinement were made in 1895 in S. Ambrogio and S. Eustorgio at Milan and in S. Michele at Pavia, but in such haste that these observations were unsupported at that time by detailed measurements and photographs. In all these churches the aisles are

¹ *Architectural Record Quarterly*, vol. VII, no. 2, 'An Echo from Evelyn's Diary.'

bordered by chapels with walls of very considerable depth, faced by pilasters which are not exposed to thrust. The



FIGURE 6. — S. AGOSTINO AT ORVIETO.

The walls lean out against buttresses of the same date and construction which lean in.
(Drawing from a Brooklyn Institute photograph.)

outward leans have now been plumbed, in all these pilasters, and excellent photographs have been made of the phenomena

in the Milan churches (Figs. 7, 8). In the right aisle of S. Ambrogio six pilasters have an average outward lean of 4 inches in 13 feet. The maximum lean is $5\frac{1}{4}$ inches; the minimum lean is $2\frac{1}{2}$ inches. It is the minimum lean which is shown by the plumb-line in Fig. 7. The chapel walls are 21 feet deep. In S. Eustorgio the average outward lean of the chapel pilasters is 4 inches in a height of 13 feet. As the phenomena are constant in all pilasters, and uniform in three separate churches which have these side chapels, there can be no doubt of constructive intention.

Among my original observations of 1870 and original announcements of 1874, regarding the Pisa Cathedral, it was observed and announced that the façade was inclined forward by construction. The upper part of the façade, however, bends back to the perpendicular (Fig. 9). The masonry measurements taken in 1895 placed this announcement beyond any doubt in my own mind and that of my assistants, but the measurements, not having been published, were consequently not brought to the attention of Italian experts. Publication was subsequently made.¹ In 1901 I went over the cathedral with Signor Annibale Messerini, the architect now in charge, and his certificate is appended (p. 195). The remarkable facts are now established beyond dispute. Photographs were also taken, in 1901, of certain features of the construction of the façades of S. Michele at Pavia and of S. Ambrogio at Milan which establish a similar constructive intention in these façades. Both of them curve back to the perpendicular, and are erect in the upper portion (Figs. 10, 11).

Of still greater interest is the discovery of a constructive leaning façade in the Renaissance Church of S. Ambrogio at Genoa, dating about 1580. The present engineering architect in charge of this church has himself built the second story of the façade. His certificate for the constructive lean of the lower portion is therefore of great interest. This certificate is appended (p. 194). The facts regarding S. Ambrogio

¹ *Architectural Record Quarterly*, vol. VII, no. 3.



FIGURE 7.—RIGHT AISLE OF S. AMBROGIO, MILAN.

The plumb-line shows an outward lean of $2\frac{1}{2}$ inches in 13 feet. The maximum lean in this aisle is $5\frac{1}{2}$ inches. The average lean is 4 inches. (Drawing from a Brooklyn Institute photograph.)

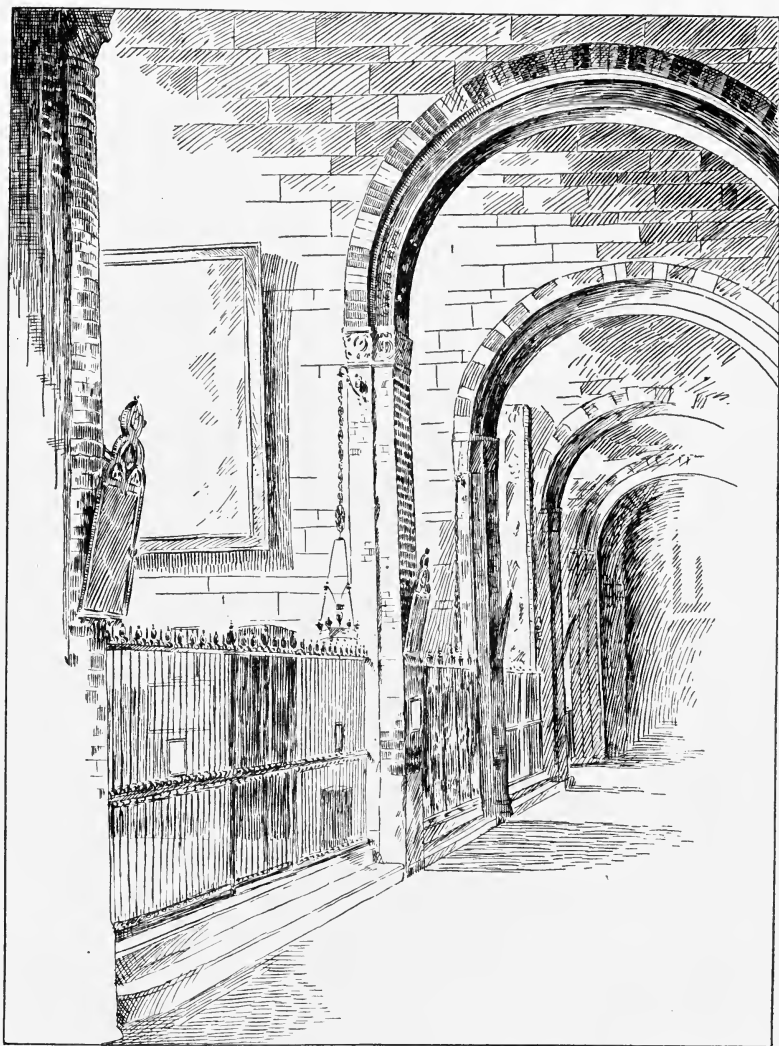


FIGURE 8.—RIGHT AISLE OF S. EUSTORGIO, MILAN, LOOKING TOWARD THE FAÇADE.

The average outward lean of the pilasters is 4 inches in 13 feet. (Drawing from a Brooklyn Institute photograph.)

were observed on the day of sailing from Genoa, in 1895, and could not be verified at that time (Figs. 12, 13). The lean amounts to about 8 inches in about 56 feet.

The purpose of these various leaning façades may have been the same as that which leads us to tip a picture on a wall, that is, to avoid foreshortening. The return to the perpendicular in the upper façade at Pisa, at Pavia, and at Milan, is probably due to considerations of stability, and it may have also been connected with the preference of certain mediaeval builders for bends and curves of architectural lines and surfaces. A similar construction in the façade of Notre Dame at Paris was announced by me at the Philadelphia General Meeting of the Archaeological Institute, in 1900.¹

The lower columns of the façade of St. Mark's at Venice were observed by me, in 1870, as having a constructive forward lean (Fig. 14). The wall from which they project is perpendicular. Announcement of this was made after the surveys of 1895,² but successful photographs were not then obtained. The picture now reproduced is one of four which are all good. It is, however, of more importance to state that this phenomenon has now been verified as constructive by the certificate of Commendatore Pietro Saccardo. The upper line of columns is perpendicular. The motive would appear to have been the preference for a bent or curving vertical line. If foreshortening alone were considered, the upper line of columns would also have leaned forward. This observation may throw light on the motive of the other leaning façades, just quoted, which bend back to the perpendicular. The amount of the lean is from 2 inches to $3\frac{1}{2}$ inches in a height of $9\frac{1}{2}$ feet. No columns are perpendicular, excepting those at the restored south-west angle.

Measurements were made in 1901 which probably determine the much debated question regarding the cause of the inclination of the Leaning Tower of Pisa. They support the obser-

¹ *American Journal of Archaeology*, V (1901), p. 12.

² *Architectural Record Quarterly*, vol. VII, no. 3.

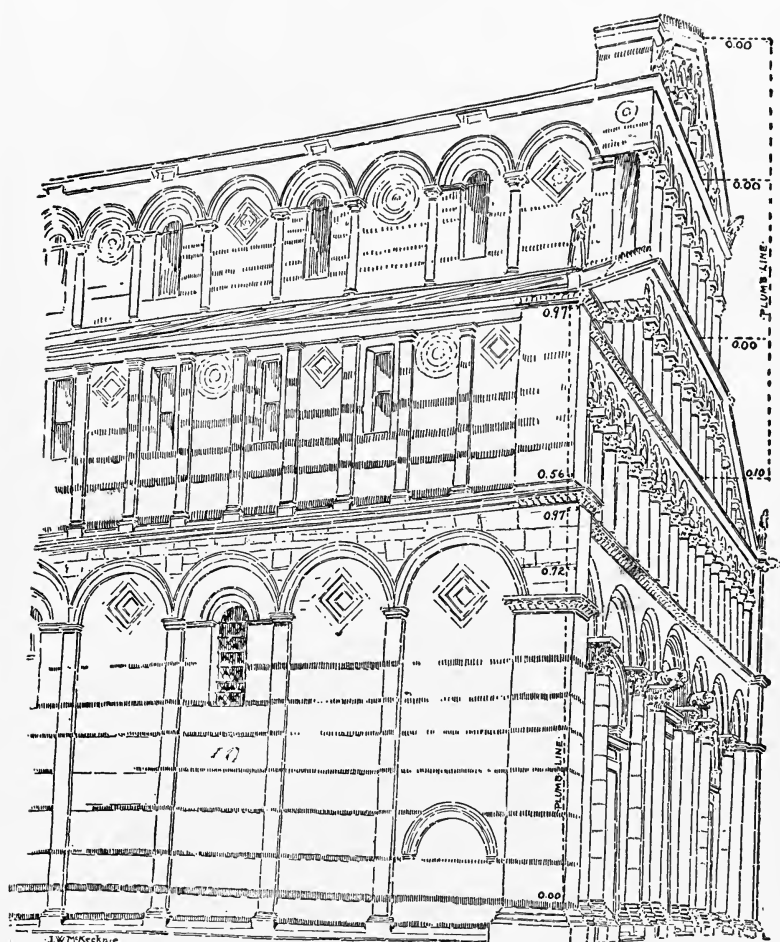


FIGURE 9.—THE LEANING FAÇADE OF PISA CATHEDRAL.

From the *Architectural Record Quarterly*, vol. VII, no. 3.¹ Measurements in foot decimals are entered on the drawing. The entire amount of the inclination is about 17 inches. (Tracing from a Brooklyn Institute photograph.)

¹ See appended certificate of Signor Annibale Messerini.

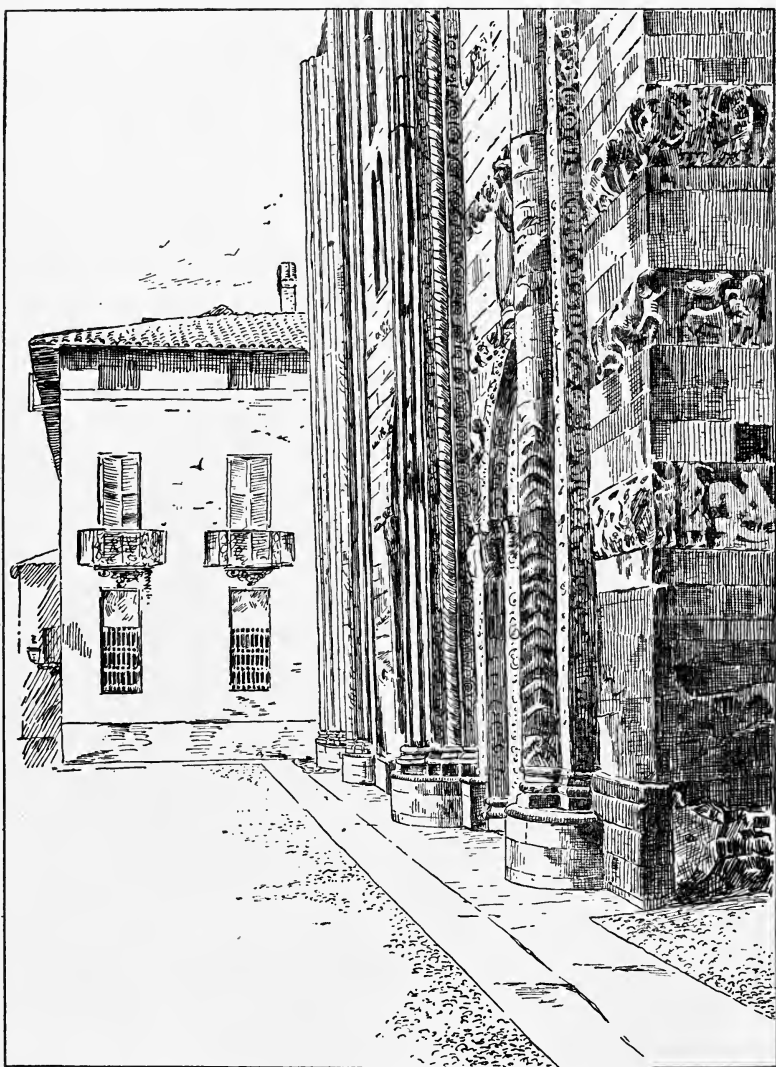


FIGURE 10. — THE LEANING FAÇADE OF S. MICHELE, PAVIA.

The inclination is about a foot, with return bend to the perpendicular (above the limit of the drawing). (Drawing from a Brooklyn Institute photograph.)

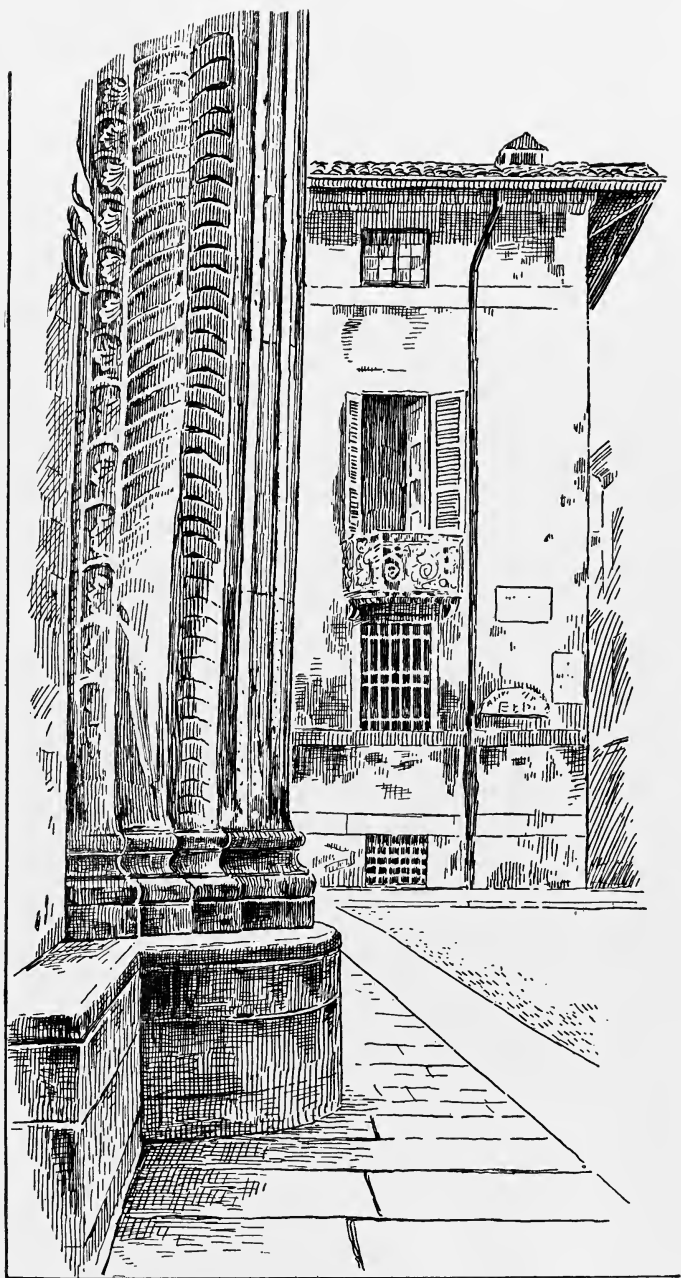


FIGURE 11. — THE LEANING FAÇADE OF S. MICHELE, PAVIA.
Detail showing the upward tilt of the base courses. (Drawing from a Brooklyn
Institute photograph.)

vations published by Ranieri Grassi in 1837,¹ but supplement them by additional facts which add to their force and by measurements which he did not supply. Grassi observes that the spiral stairway in the cylindrical wall of the tower is built with gradually increasing height, as it turns from the north to the overhanging south side of the first story. He interprets this as showing the disposition of the builder to add to the weight of the cylindrical wall on the upper side of the lean and to diminish this weight on the overhanging side. He adds that on the south side of the tower the ceiling is tilted up so that, on the south side of the stairway, it is about half a braccio (12 inches) higher than on the north side. This extremely important fact he justly interprets as showing the wish of the builder to throw more of the weight above the ceiling on the inner wall, and less on the outer overhanging wall. No measurements are otherwise given for the heights of the stairway, and no mention is made of the fact that the variations in height continue in the upper stories of the tower. As regards even the first story, the statement is indefinite. It is only said that, if one raises the hand in the stairway on the north side of the tower, it touches the ceiling, and if the hand is raised in the stairway on the south side of the tower, it does not reach the ceiling.

When exact measurements are taken, the following facts appear. The entrance to the spiral stairway on the left of the entrance door is at a point midway between the north and the south sides of the tower, the latter being the overhanging side. At its entrance the stairway has a height of 7.94 feet. On the highest step of the north side (the thirteenth step) the height is 7.63 feet. On the step corresponding to the greatest lean on the south side (the forty-sixth step) the height of the ceiling from the step line is 8.12 feet on the upper side, and 9.17 feet on the lower side. The step inclines with the lean, and dips down 0.34 feet. Thus the south side of the stairway is actually 1.05 feet higher than the north side, in

¹ *Descrizione di Pisa*, vol. II, p. 97.

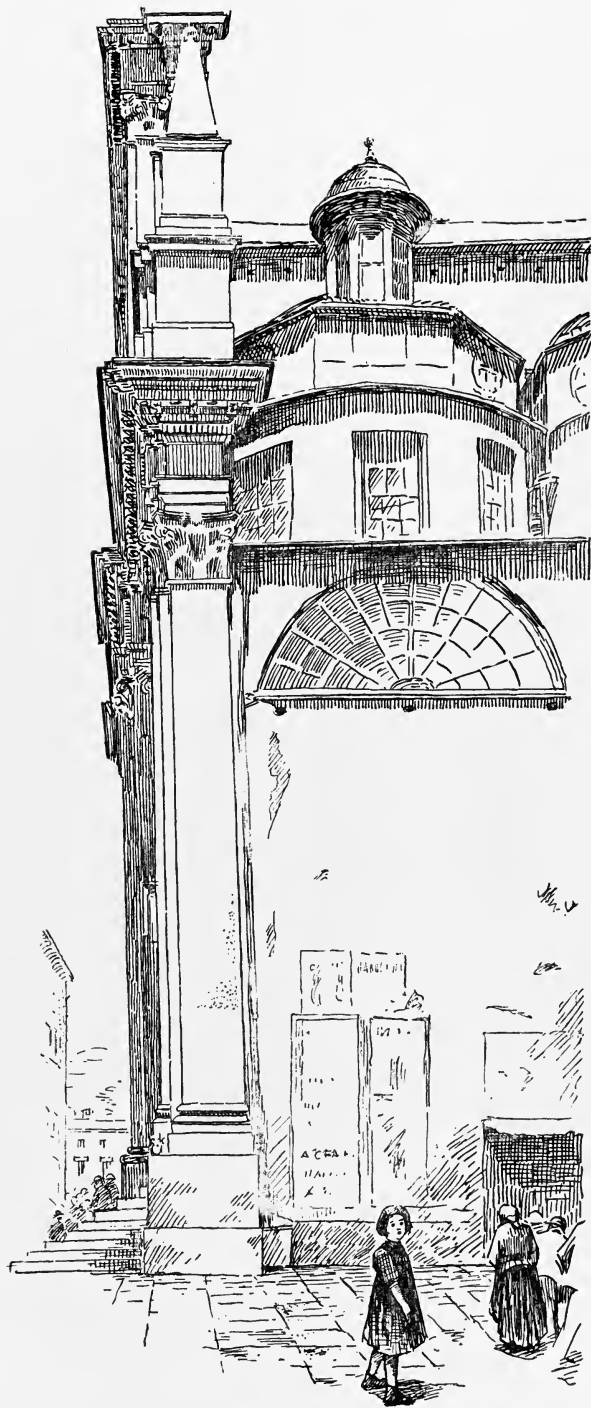


FIGURE 12.—THE LEANING FAÇADE OF S. AMBROGIO, GENOA.

The inclination of the first story is about 8 inches in 56 feet. (Drawing from a Brooklyn Institute photograph.) See appended certificate for construction.

a width of only 3.61 feet. The south side of the ceiling is 0.71 feet (or $8\frac{1}{2}$ inches) above the level of the north side, in this width. Then, adding the two differing measures of the

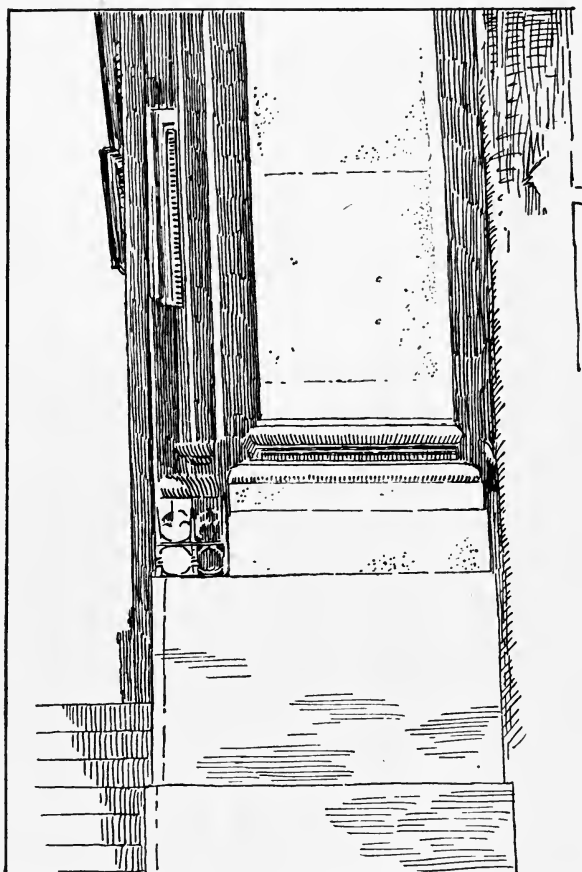


FIGURE 13.—THE LEANING FAÇADE OF S. AMBROGIO, GENOA.

Detail of the base courses, showing an oblique cutting of the pilaster. (Drawing from a Brooklyn Institute photograph.)

walls at this point and dividing by two, to obtain the average or central height of the stairway at this point, we find it to be a foot higher than it is at the thirteenth step.

If we now follow the rising spiral to the north side, it gradually grows lower in height, to the amount of 10 inches (0.84

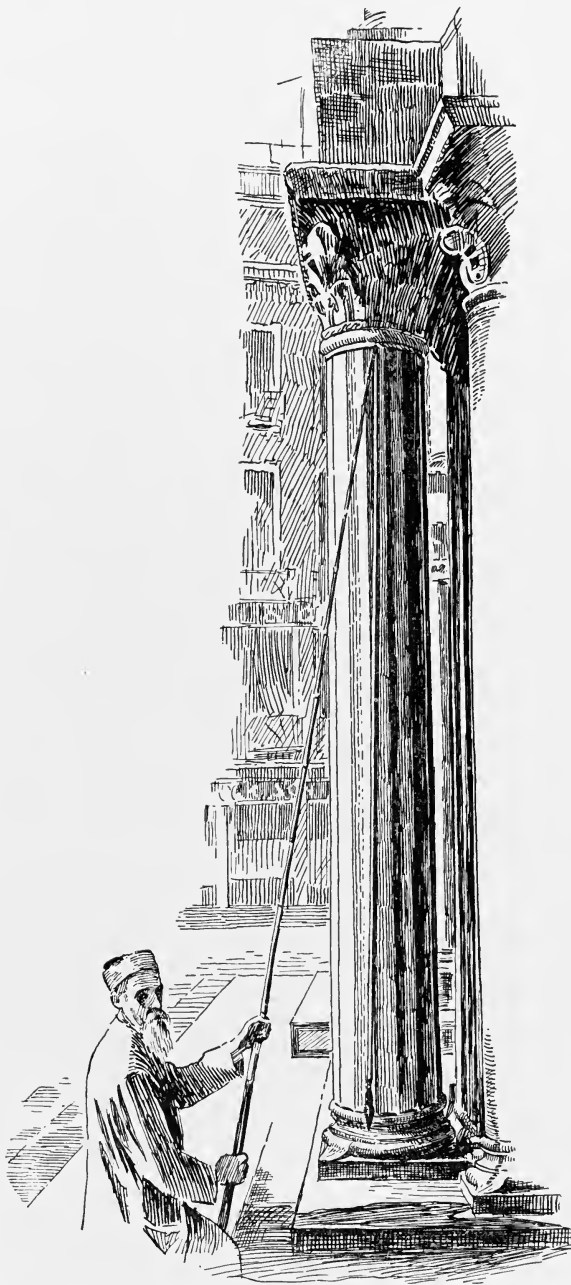


FIGURE 14. — DETAIL OF THE FAÇADE OF ST. MARK'S, VENICE.

The columns lean out from 2 inches to $3\frac{1}{2}$ inches in a height of $9\frac{1}{2}$ feet. (Drawing from a Brooklyn Institute photograph.) See appended certificate for construction.

feet) at the seventy-ninth step. As the spiral turns toward the overhanging south side, the height gradually rises 8 inches (0.65 feet) to the one hundred and fifteenth step (which is about the centre of the overhanging side). In the next half-turn to the north side the height lowers 14 inches (1.18 feet).¹ Beyond this point to the next central point on the south side, there is no appreciable variation; and the spiral stairway ends before another turn is completed.

There are thus four separate changes in the height of the stairway (without counting the difference of about 4 inches between the entrance and the thirteenth step), all of which can be explained on the theory of an intentional inclination, and all of which would be positively incomprehensible on any other theory. To these facts must be added the significant one regarding the inward downward tilt of the stairway ceiling on the overhanging side of the first story. When the delicate masonry arrangements are considered, by which these variations of height and of level are gradually and insensibly obtained, there does not appear to be any explanation possible excepting that of intentional construction.

WILLIAM H. GOODYEAR.

MUSEUM OF THE BROOKLYN INSTITUTE
OF ARTS AND SCIENCES.

CERTIFICATES

I

GENOVA, Piazza Invrea 8.

Sig. WM. H. GOODYEAR:

Per aderire al desiderio dalla Signoria vostra espressomi eccomi ad esporle alcune notizie a riguardo della facciata della Chiesa di S. Ambrogio. La detta facciata venne eseguita soltanto in parte, cioè pel tratto inferiore all' epoca della costruzione della chiesa nel 1580, cioè verso la fine del secolo sedicesimo.

¹ There is an intermediate variation between these points, culminating at the centre of the east side in a rise of 18 inches. There is no obvious explanation for this change, and it is the only one which breaks the rule of a graduated and unbroken sequence.

Recentemente, cioè negli anni 1891, 92, 93, per cura e spese del benemerito Prevosto di detta chiesa l' Abbate Poggi, si procedette alla riparazione della parte esistente di detta facciata, ed a completare la medesima venne costrutta a nuovo la parte superiore.

In tale circostanza si ebbe a costatare che la parte inferiore di detta facciata aveva una inclinazione sulla verticale o strapiombo di M. 0.20 circa sopra un altezza approssimativa di M. 15.

Naturalmente la parte superiore venne costrutta senza alcuna inclinazione. L' inclinazione della parte inferiore non si crede debba attribuirsi a spinte interne degli archi o ad altra causa di deterioramento, giacchè in tel caso si avrebbero delle deformazioni parziali sulla detta facciata, mentre invece una tale inclinazione è in certo modo costante su tutta la facciata e le decorazioni della stessa si trovano orizzontali e non inclinati nel senso dello strapiombo. Per cui si deve credere che la stessa sia stata costrutta fin da principio con detta inclinazione.

Ing. Arch. LUIGI DE ANDREIS,

Direttore dei lavori di detta facciata.

GENOVA, li 22 Luglio, 1901.

II

PISA, li 9 Agosto, 1901.

Ill^{mo} Sig. GOODYEAR:

Ho esaminato le misure da Lei prese nei monumenti di Pisa e posso affermare che le prove sono complete per le cose seguenti.

1. Che la facciata della Cattedrale di Pisa è stata inclinata per intenzione nella originale costruzione.
2. Che tutte le curve di questo edificio sono state fatte con intenzione nella originale costruzione, sia le curve orizzontali come quelle verticali.
3. Che le linee oblique delle gallerie interne, sono state costrutte nel modo che oggi si vede.
4. Che la grande cornice esterna è obliqua pure per costruzione.

Con ogni ossequio,

Della S.V. Ill^{ma},

Devot^{mo},

Ing. ANNIBALE MESSERINI.

III

BASILICA DI S. MARCO

IN VENEZIA.

DIREZIONE DEI RESTAURI

E DELLO STUDIO DI MOSAICO.

VENEZIA, 19 Agosto, 1901.

CHIARISSIMO SIGNORE:

Permettemi anzitutto che mi congratuli con Voi degli importanti studi che andate facendo da molti anni sopra i monumenti antichi e in ispecie intorno a certe particolarità di costruzione in gran parte sin qui ignorate

e che rivelano sapienti e ingegnosi artifizi usati dagli architetti che li eressero, per ottenere effetti prospettivi singolari. Già si sapeva come, per esempio, ne' monumenti di architettura medioevale si avesse il costume d' inclinare all' infuori i frontoni e le cuspidi con gli ornamenti sovrapposti, come si fa anche in oggi per i quadri e per le statue. In particolare questo artificio vedesi usato assai marcatamente nelle cuspidi della facciata principale della nostra Basilica di San Marco; non così in quelle delle facciate laterali, perchè l' architetto che le ricostruì, nei restauri di circa trenta anni or sono, non capì il magistero che aveva presieduto al loro collocamento e le mise a piombo. Lo stesso artificio vedesi usato nella Porta della Carta del Palazzo Ducale e in tanti altri monumenti anche fuori di Venezia, come per esempio nel Sepolcro degli Scaligeri a Verona. Si sa del pari che nella stessa nostra Basilica la facciata principale è disposta in curva sensibilmente rientrante.

Così i sei minareti della stessa facciata non sono eguali in altezza, ma vanno salendo da una parte e dall' altra verso la cuspide centrale. Che si fa eccezione quello dell' angolo sud-ovest, egli è perchè fu rifatto in seguito ad un incendio e chi lo rifece non s' accorse dell' artificio e lo costruì eguale al penultimo.

Voi poi trovaste nuove particolarità di questo genere che io aveva sempre creduto accidentali, ma che essendo comuni a tanti altri monumenti devono accettarsi quali veri artifizi di costruzione. Tali sono le colonne della facciata della nostra Basilica sensibilmente pendenti all' infuori nell' ordine inferiore e a piombo nel superiore. Tali sono pure i piedritti interni sostenenti le volte maggiori che l' inclinano all' indentro, aumentando così notevolmente la corda dell' arco che si corrisponde, in confronto della base, senza che l' arco presenti qualsiasi abbassamento o deformazione; il che dimostrerebbe che così fossero stati disposti fin dall' origine. Tali sono finalmente i parapetti delle gallerie composti a plutei, che vanno da un arcata all' altra lungo le braccia della crociera, i quali sono marcatamente curvilinee con la convessità all' insù. Bisogna certo ammettere che specialmente in quest' ultimo esempio qualche deformazione possa essere stata causata, o per lo meno aumentata, dallo squilibrio dei pesi delle masse murali sopra un terreno cedevole come quello di Venezia. Tuttavia il caso è troppo costante perchè si possa ammetterlo siccome puramente accidentale in via assoluta.

Del resto gli studi che voi andate facendo sono molto interessanti e possono condurre anche ad altre scoperte più importanti ancora; per cui sono a congratularmene e in pari tempo vi prego di credermi quale ho l' onore di professarmi.

Vostro dev. servo,

PIETRO SACCARDO.

Sig. Wm. H. Goodyear, Curatore delle Belle Arti
nel Museo di Brooklyn a Nuova York.

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN RECENT PERIODICALS

GENERAL AND MISCELLANEOUS

The Representation of the Gallop in Art.—In *R. Arch.* XXXIX, 1901, pp. 1–11 (3 figs.), S. REINACH concludes his discussion of the representation of the gallop. The relations of Europe with the Tartars and Chinese began in the thirteenth century, but the first definite mention of Chinese porcelain is in the fifteenth century. From that time, importations of Chinese porcelain become more frequent. Mongol types appear in paintings of Pisanello and other Italian artists. The *galop volant* is familiar to the Chinese. It appears in European art toward the close of the eighteenth century, and its appearance may be due, at least in part, to the influence of Chinese art. The article closes with a brief résumé of the results of the whole discussion.

Costume Deformities.—In the *New York Medical Journal*, October 26, 1901 (6 pp.; 6 figs.), Dr. E. H. BRADFORD calls attention to the deformities produced by costumes, especially by the modern corsets, suspenders, hose supporters, and skirts hung from the waist. Examples of normal and abnormal figures are given. Even ancient Greek statues show some slight costume deformities, due to the wearing of the girdle.

Ancient Places and Names of Places.—In *R. Arch.* XXXVIII, 1901, pp. 395–406, VICTOR BÉRARD continues his discussion of the Phoenicians and the *Odyssey*. (See *Am. J. Arch.* 1901, pp. 226, 453.) He discusses the objects in which the Phoenicians traded, especially the linens and purple cloths, and in connection with the latter, the purple fisheries. The city of Cyparissus is identified with Ambrysus. Iron, used chiefly for utensils, is briefly treated. It was found in many places in Greece and elsewhere. *Ibid.* XXXIX, pp. 93–109, χαλκός, which Bérard thinks is bronze, is dis-

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Dr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the *JOURNAL* material published after December 31, 1901.

For an explanation of the abbreviations, see pp. 99, 100.

cussed. The numerous ancient sources of tin are mentioned, and the importance of the Phoenicians as manufacturers and traders in bronze is emphasized. Just as several of the Greek words for garments are of Phoenician origin, so several of the names of weapons are Phoenician. Chalcis probably never had copper mines, but may have been a place where copper objects were made, or at least sold. Several place-names, on the island of Elba, in Italy, and elsewhere, are shown to be Phoenician. *Ibid.* pp. 213-228, glass ware and ornaments are discussed. The water route from the Mediterranean to the Baltic by way of the Volga was known in very early times. Many Semitic names and other traces of Phoenician traders are found along the Mediterranean coast of Asia Minor, and in the regions by the Dardanelles and the Black Sea. Other ancient river routes are discussed. *Ibid.* pp. 401-424, the frequent recurrence of the numbers six and seven in the Homeric poems is adduced as evidence of strong Phoenician influence. The names of birds, κήνξ (κήξ, καύαξ, καύήξ), ἀνοπαῖα, αἰετός, σκῶψ, and φῶκη, seal, are transcribed from Semitic originals. The island of Santorin once had a Phoenician settlement. The Greek name, *Thera*, is from the Semitic *Tar*, and is identical in meaning with the other Greek name of the island, Καλλίστη. Other "doublet names" of Greek and Phoenician origin are mentioned. This series of articles is to be published by Colin, under the title, *Les Phéniciens et l'Odyssée*.

Egyptian Cutting-out Tools.—In *Biblia*, November, 1901, pp. 247-249 (fig.), W. M. FLINDERS PETRIE discusses a series of knife blades of peculiar shapes. These he explains as tools intended for cutting out textile fabrics, as scissors were not known to the Egyptians.

The Wall of Anastasius at Constantinople and the Dobrudja Walls.—These two lines of defence were inspected by C. SCHUCHHARDT in 1898. The former, running from the Sea of Marmora to the Black Sea, about thirty-five miles west of the Bosphorus, is buried under accumulations of earth; but its structure of masonry and concrete can be discovered, as well as the towers, gate-posts, and camps. Inscriptions show that it was in use in the tenth century. Of the three walls running from the Black Sea at Tomi to the Danube, it is found that the earliest is an earthwork erected by barbarians against the Romans, that the second is a genuine Roman work similar to the *limes* of the Province of Germany, and that the third, or stone wall, belongs to the fourth century, and has some markedly German features. A full account will be published by the native scholar, Tocilescu, who has been carrying on the excavations. (*Jb. Arch. I.* XVI, iii, 1901, pp. 107-127; pl.; 31 cuts.)

The Neolithic Epoch in the Tonsus Valley (Eastern Roumelia).—In *R. Arch.* XXXIX, 1901, pp. 328-349 (18 figs.), JÉRÔME, of the Augustines of the Assumption, describes his collection of antiquities from the Tell Racheff, near Jamboli. Among these are only two small pieces of bronze and five horn utensils. Objects of prehistoric pottery number seventy-four, — seven pyramidal weights (?), two balls, seven figurines (three of which represent animals), two moulds, and fifty-one vases of various shapes, with linear and geometrical ornaments.

Connection between Mycenaean Civilization and Italy.—Objects of Mycenaean manufacture found on the Scoglio del Tonno at Tarentum, in a stratum resting upon a *terramara*, show a connection between the civiliza-

tion of Mycenae and the last period of the Italian bronze age, which is the time of the *terramare*. (Q. QUAGLIATI, *B. Paletn. It.* 1900, pp. 285-288; 2 figs.)

Pliny as an Historian of Art.—In *Jb. Arch. I.* XVI, 1901, pp. 75-107, D. DETLEFSEN discusses Pliny's own contribution to Books XXXIV-XXXVI of the *Hist. Nat.*, and his use of Varro's *Hebdomades*. He finds that passages in XXXIV and XXXV (bronze sculpture and painting) and the larger part of XXXVI (marble sculpture, for which literary sources were apparently scanty) are taken from a catalogue of the works of art in temples and public places in Rome, forming part of the censor's report of 73 A.D. These passages are distinguished by a topographical arrangement according to the fourteen regions of the city and by a prescribed form of statement. Additions to the items are from Pliny's own observation, being either information derived from the inscriptions on the bases of statues, or references to popular estimation of the works or to their standing in the Temple of Peace (75 A.D.) or in other buildings of Vespasian. In the *indices*, Pliny distinguishes the original portions by giving numbers. It seems probable that he had a large share in preparing this official catalogue, perhaps as *curator operum publicorum*.

Hermes-Thoth.—In *Jb. V. Alt. Fr.* 107 (1901), pp. 45-49 (woodcuts), A. FURTWÄNGLER adds further remarks on the Hermes-Thoth (Hermes with a feather quill rising from his hair) to his article in *Jb. V. Alt. Rh.* 103, pp. 6 ff., and G. LOESCHKE publishes a similar marble head of Hermes now in the museum at Bonn.

Five-wells Tumulus, Derbyshire, England.—In *Reliq.* VII, 1901, pp. 229-242 (14 figs.), JOHN WARD describes in some detail the Five-wells tumulus in Derbyshire. The tumulus is nearly circular, and has two chambers, each entered by a passage. At different times, skulls and other human remains have been found in it. Flint instruments and other objects show that the tumulus belongs to the pre-metallic age.

Megalithic Monuments of the Province of Constantine.—In *R. Arch.* XXXIX, 1901, pp. 21-34 (8 figs.), Commandant CH. MAUMENÉ describes monuments of the plateaux of the province of Constantine in Africa. These are circular in shape, of different sizes and different degrees of care in construction. The fundamental form is that of a dolmen surrounded by a cromlech. They have been regarded as prehistoric or as the work of some race which held temporary possession of the country. Roman inscriptions found on stones used in building some of them show that they are not prehistoric. They are really the work of the Berber inhabitants, the remote ancestors of the present Chaouïas. Other buildings of the region are shown to belong to the same people.

The Harbors of Carthage.—R. OEHLER's fourth article on the harbors of Carthage (cf. *Am. J. Arch.* 1900, p. 547) consists largely of extracts, with comment, from the report of the French ensign Hantz, who took up the work of Lieutenant de Roquefeuil. Remains of a mole inclosing the southern half of the bay of El Kram, south of Falbe's quadrilateral, are taken by Hantz to be remains of Scipio's mole; and on them he bases an explanation of the siege of 147 B.C., which is not accepted as conclusive by Oehler. (*Arch. Anz.* 1901, 3, pp. 140-147; 3 cuts.)

The Tomb of the Christian.—In the *Scientific American*, October 17,

1901, is a description (1 fig.) and brief history of the so-called tomb of the Christian, supposed to be that of Juba II, the most striking burial monument of northern Africa.

ASIA

Sogdianus, King of the Persians.—In *C. R. Acad. Insc.* 1901, pp. 482–493, J. OPPERT discusses a cuneiform inscription on marble published by Scheil (*Notes d'épigraphie et d'archéologie assyriennes*, No. LVI). He finds it to be a forgery, but a forgery copied from a lost inscription which he restores to read: "Sogdianus, Achaemenides, King of Babylon (or of the countries). In the time when I built this house for the residence of my royalty on the land of Babylon, that which is the centre of Babylon . . ." This Sogdianus, one of the natural sons of Artaxerxes I, reigned for some six and a half months from January to July, 424 B.C. His name is probably derived from the country of his birth, Sogdiana. The chronology of the Persian kings is discussed.

P. J. Mariette's Notes on Baalbek and Palmyra.—In the library of the Institut de France are copies of Robert Wood's *Ruins of Heliopolis, otherwise Baalbek* (London, 1757), and *Ruins of Palmyra, otherwise Tedmor in the Desert* (London, 1753), which once belonged to P. J. Mariette. At the back of the *Palmyra* there are bound into the volume a review of the book by Barthélemy; Reflexions on the Alphabet and Language of Palmyra, by Barthélemy; two inscriptions of Palmyra; a manuscript letter by a French traveller named Granger, to the Count of Maurepas; some researches on Palmyra by Mariette; a view of Palmyra drawn by Mariette after an original by Giraud; a manuscript on Palmyra by the architect Soufflot; and two letters from Barthélemy to Mariette. At the end of the *Baalbek* are fifteen plates after drawings by Desmonceaux; his Observations on the Antiquities of Baalbek, dated 1758; an extract from a letter of Granger to Count Maurepas on Baalbek; the description of the ruins of Baalbek by the consul Poullard; Mariette's copy of a drawing by Giraud of the port of Tripoli in Syria; and Barthélemy's article on Wood's *Baalbek*. The most valuable parts of these articles and letters are published by Paul Perdrizet in the *Revue des Études Anciennes*, III, 1901, pp. 225–264; 3 figs.

The Image of Jupiter Heliopolitanus.—In *C. R. Acad. Insc.* 1901, pp. 437–482 (3 pls.), Father RONZEVALLE, of Beyrouth, publishes a relief from Deir el-Qalā'a with the inscription [I](ovi) [O](ptimo) M(aximo) H(eliopolitanus), M. Pultius Felicianus, M. Pultius Ti[be]rinus, filius. The relief represents a beardless person wearing a calathus. In his right hand he brandishes a whip. An object in his left hand is a pine cone. His body is covered with a sort of breastplate divided into zones of squares in which are trefoil and quatrefoil flowers. The person has no legs. At each side of him is a much mutilated bull. This may not be an accurate representation of the idol in the temple of Zeus at Heliopolis, but is certainly derived from it. Passages in Macrobius (*Saturnalia*) and Pseudo-Lucian (*De Dea Syria*) relating to the Apollo and Hadad of Hieropolis and to the Zeus of Heliopolis and his origin are discussed. The cult at Heliopolis was probably imported from On in Egypt before the time of Alexander. The relief from el-Ferzol, representing a mounted figure and a youthful deity (Adonis) is republished. Several dedications to the Zeus of Heliopolis are published, and the impor-

tance of his cult is emphasized. The relations of Heliopolis to Egypt are discussed.

Inscriptions in Palestine.—In the *Mittheilungen und Nachrichten d. deutschen Palaestina-Vereins*, 1900, pp. 17–21, several Palestinian inscriptions are discussed by SCHÜRER. The inscription from the propylaea at Gerasa is reprinted with new supplements. It belongs to the year 162 A.D. As Attidius Cornelianus is mentioned as governor of Syria, it is clear that Gerasa still belonged to that province. It became a part of the province of Arabia toward the close of the reign of Antoninus Pius.

A Stele from Amrith.—In *C. R. Acad. Inst.* 1901, pp. 496–508, de Clercq discusses a stele in his possession, said to have been found near Amrith. A person holding a curved staff is walking upon a lion which is walking upon the tops of two hills. The person holds a small lion by the paw. Above is a disk and crescent, and still higher a winged disk. The style is a mixture of Egyptian and Assyrian. According to de Clercq the monument is Hittite, of the fourth or fifth century B.C. *Ibid.* pp. 509–511, Ph. Berger discusses the inscription on the stele. He reads two lines “ [some one] has erected this monument to his Lord [?] because he has heard his voice. May he bless him.” *Ibid.* pp. 373–383 (and 511–512) Ch. Clermont-Ganneau finds that the monument is Phœnician, not Hittite. It was published (imperfectly in some respects) by him (*Mission en Palestine et en Phénicie entreprise en 1881. Cinquième rapport*, pp. 128–129, No. 199, pl. vi) and by Perrot and Chipiez (*Hist. de l'Art dans l'Antiquité*, III, p. 413). He reads the inscription, which he finds consists of three lines: “This is the stele (nesib) which . . . baal(?) . . . son of Abdis(?) has dedicated to his Lord Chadrappa(?), for he has heard the voice of his words(?)” The person represented is a divine hero or a god, rather than, as de Clercq suggested, a king. The crescent holding a disk is probably the “new moon with the old moon in her arms.”

Two Days in Phrygia.—In the *Revue des Études Anciennes*, III, 1901, pp. 269–279, W. M. RAMSAY gives the results of two days spent in Phrygia. He found that Trajanopolis was situated at Tcharik-Keui, and that Karamon-Agora was probably at Sousouz-Keui. At Erjish he read several additional words and letters materially improving the text of the Jewish inscription (*Cities and Bishoprics of Phrygia*, No. 559). At the station of Banaz, two hours from Ahat-Keui, he copied a long inscription of Akmonia, containing part of the testament of Praxias. In this the testator provides that roses be offered at his tomb on the day of Eudaimosyne, in the month Panemos. Among deities mentioned is the Ephesian Artemis. The date is 95 A.D. A second inscription, evidently from the heroum of Praxias, shows that he was a Roman citizen. Another inscription is in honor of L. Egnatius Quartus, of the Roman tribe of Tereteina, at Akmonia. Still another is in honor of A. Claudius Julianus. An inscription on an altar with a relief representing a horseman (also at Banaz) is in honor of a hierophant Telesphorus. Two others are simple epitaphs. An inscription from Thyatira, in Latin, states that M. Antonius Galata gave the city by his will, in his own name and that of his parents, M. Antonius Galata and Antonia Pontice, something connected with the water supply. A Greek inscription from Ambar-Arasi states that the senate and people of Sidamaria dedicated a bath to the emperor Trajan. All the inscriptions mentioned are published.

The Sarcophagus of Ambar-Arasi.—In the *Revue des Études Anciennes*, 1901, p. 358, W. M. RAMSAY calls attention to the remarkable similarity between the great sarcophagus from Ambar-Arasi (Sidamaria), which he saw at the railway station at Konia (cf. *Ibid.* p. 278), and the smaller sarcophagus from Liberia, now in the Ottoman Museum at Constantinople. Both are apparently by the same artist, who may have gone from Tarsus to Sidamaria.

GREECE

ARCHITECTURE

The Development of the Greek Temple.—In the *Gaz. B.-A.* 1901, pp. 55-68 (12 figs.), HENRI LECHAT continues his treatment of the 'Origin and Development of the Greek Temple' (see *Am. J. Arch.* 1901, p. 458). This article is devoted to the sculptured and painted adornment of the Doric temple, showing how it is dependent upon the architectural forms. The infinite variety of proportions in different Doric temples, in spite of their general similarity, is emphasized. *Ibid.* pp. 139-153 (13 figs.), the Ionic temple is discussed. Its prototype had a sloping wooden roof, not the flat terrace of earth which covered the Mycenaean *megaron*, from which the Doric temple was developed. Hence the greater slenderness of the Ionic column, which supported merely an architrave, cornice, and roof. The frieze was borrowed from the Doric style, but changed to harmonize with the other features of the Ionic temple. The Ionic capital is derived from a rectangular block inserted between the upright shaft and the architrave. When the lower edges of the ends of this block are rounded, the volute becomes the most natural kind of ornament, especially in Asia, near the Assyrians and other peoples who had long employed various kinds of volutes. When Greek civilization spread over Asia after Alexander, it became sufficiently Asiatic to prefer the Ionic style to the more strictly Hellenic Doric. There is no Corinthian order, for Corinthian temples are merely Ionic temples with a new form of capital. The Ionic style made ornament far more important than did the Doric. In the Parthenon the Doric is influenced by the Ionic style.

The Tholos at Epidauros.—At the July meeting of the Berlin. Arch. Gesellsch. B. GRAEF discussed Svonoros's article in the *Revue internationale d'archéologie numismatique* on the tholos at Epidauros, in which it is inferred from comparison with the round shrine of Palaemon with underground burial chamber at Corinth (Paus. II, 2. 1 and coins) that the building at Epidauros was also a heroum (*Arch. Anz.* 1901, p. 149).

The Greek House.—In *J.H.S.* XXI, 1901, pp. 293-305 (13 figs.), E. A. GARDNER shows, partly by plans of houses at Delos, that the typical Greek house before the second century B.C. consisted of a single court, often called *γυναικωνίτης*, with a living room, *παστάς*, and a room for entertaining, *ἀνδρών*, among the adjacent chambers; that the Mycenaean and Homeric hall with vestibule, which became the temple type of historic Greece, was a modification of the *παστάς*; that the two courts in the Palace at Tiryns belong to two separate houses; and that the current notion of a house with two courts and complete separation of men and women arose from the Roman use of such houses and from misinterpretation of Vitruvius.

The Date of the Dionysiac Theatre at Athens.—In *Sitzb. Mün. Akad.* 1901, iii, pp. 411-416, A. FURTWÄGLER finds that the new temple of Diony-

sus was evidently built at the same time as the Dionysiac theatre and its annex, the stoa. The date of the temple is fixed about 421-413 B.C. — certainly not much later — by the statement of Pausanias that Alcamenes made the statue in it. The temple is, however, not the one dedicated by Nicias, which was a much smaller edifice. The date of the temple of Dionysus determines the date of the theatre, which therefore belongs to the fifth century B.C. It is the first building in which foundations of conglomerate blocks, with upper parts of *poros* and Hymettus marble are employed. The alteration attributed by Dörpfeld to Hellenistic times is due rather to Lyeurgus.

The Theatre at Syracuse. — In *Athen. Mith.* XXVI, 1901, pp. 9-32 (1 cut), E. DRERUP gives the results of a study of the Greek theatre in Syracuse made in 1899, with a plan by Koldewey. The ancient references to the theatre lead to the conclusion that the stone theatre was probably built before the middle of the fourth century B.C. The remains of the stage buildings are scanty. The Greek proscenium may be represented by a foundation wall, which evidently supported columns, but it has probably disappeared, and this represents the Roman *scaenae frons*, which would have occupied the exact line of the Greek proscenium. About 4 m. in front of this is a foundation with holes in which were placed wooden posts for a low stage. As this stage was not as wide as the back wall, and projected into the orchestra across the *parodoi* in a way unparalleled in any known Greek theatre, it is interpreted to be the low wooden stage for the *phlyakes* of Rhinthon and his successors. It was a temporary structure and could be easily removed to leave the orchestra free for the performances of the Greek dramas. The further history of the stage in Roman times is also traced. Drerup accepts Dörpfeld's views as opposed to Puchstein's. This paper is a preliminary study of this important theatre.

SCULPTURE

A Stele from Nisyros. — In *R. Arch.* XXXIX, 1901, pp. 158-166 (1 pl.), S. REINACH publishes a stele from Nisyros, now in the museum at Constantinople. The relief represents a standing nude youth. The work belongs to about 470 B.C. It is a product of the Ionic or Island school of sculpture. Other works of this school and its offshoots are briefly discussed. The pediment groups of Olympia belong to the same school. The stele from Nisyros is one of the finest of the series of Island stelae.

The Tyrannicides at Naples. — In *Röm. Mith.* 1901, pp. 97-108, E. PETERSEN discusses certain points from a further study of the statues in view of the opinions of SAUER (*Röm. Mith.* 1900, pp. 219 ff.). Harmodius cannot have held the scabbard in his left hand. The original relative position of the two statues is studied from the drapery over the left arm of Aristogeiton in the statue and in the well-known relief. Harmodius was the prominent figure in the group, which was so placed that the left side was toward the passing throng. But Aristogeiton stood a trifle in advance.

The Cow of Myron. — RICHARD DELBRÜCK, in *Röm. Mith.* 1901, pp. 42-46 (pl.), describes the marble cow of the Museo dei Conservatori, and argues that the original was the bronze cow of Myron.

The Lancelotti Discobolus. — In *Sitzb. Mün. Akad.* 1901, v, pp. 705-708, A. FURTWÄNGLER announces that a cast of the head of the Lancelotti

Discobolus is in the collection of casts in the Louvre (No. 1402, "tête de Mercure"), and copies of it are obtainable. The hair is carelessly and imperfectly done, and the Berlin replica is the only one which gives a good idea of the hair of the original work of Myron. The newly identified cast proves, however, that the Lancelotti replica gives the best idea of the face, which has much more life than one would imagine, judging from the existing photographs. The difference between this and Polyclitan heads, like that of the "Idolino," is marked.

The Discus-thrower of Myron, and Other Figures.—H. LUCAS, in *Röm. Mith.* 1901, pp. 244–257 (fig.), gives a note on the history of the Myronian statue of the discus-thrower, now in the Capitoline Museum at Rome, and discusses two other antiques: 1. A female helmeted figure on one of the Corinthian capitals in the great hall of the Baths of Caracalla is doubtless Roma, as Matz believed. It was probably a reproduction of a well-known statue, perhaps a cult-statue, which itself is best represented by a torso in the Naples Museum (ARNDT-AMELUNG, *Einzelaufnahmen*, III, 771). 2. A head in the cortile of the Vatican Belvedere is wrongly placed on a draped female body of the Hellenistic age (see CLARAC-REINACH, *Stat. Gr.* I, 278, 6). It is surely the head of a young man, not, as has been generally supposed, of a woman, and is a good Roman copy of a work of Peloponnesian art of the first half of the fifth century B.C.

New Light on the Sculptures of the Parthenon.—In *Harper's Magazine*, December, 1901, pp. 12–18 (7 figs.), CHARLES WALDSTEIN discusses three marble statuettes in the Albertinum at Dresden. The three figures were "thrown in" with some other sculptures bought in Rome in 1892. One is so ill preserved that it is neglected in the discussion. The two others are a reclining male figure, 0.35 m. long by 0.20 m. high, and a seated female figure 0.31 m. in length and in breadth. Both lack the heads, the male figure lacks the lower part of the legs, and the female figure lacks the arms. The male figure is a copy of the "Cephisus" from the western pediment of the Parthenon, somewhat modified in the upper part so as to resemble the "Theseus" or "Olympus" from the eastern pediment. The skin of an animal drops from the knee of the raised right leg to the left leg. Examination of the "Cephisus" from the pediment shows that this motive once belonged to that figure. The upper part of the female figure is nude, the lower part draped. The statuettes evidently belonged to a pediment group of small size, as did the statuettes of similar dimensions found some years ago at Eleusis, which represent figures from the Parthenon. The two figures in Dresden evidently belong together, and the male figure is a copy of a figure from the Parthenon. The female figure is, then, a copy of one of the lost figures, probably one which was placed a little to the left of the centre of the eastern pediment. The name Aphrodite is suggested. The importance of the "Cephisus" and the relation of Scopas to the art of the pediments of the Parthenon are briefly discussed.

An Aphrodite of the Fifth Century B.C.—On the Doria-Pamphili estate at Rome there is a statue of Aphrodite, — a standing figure clothed in *chiton* and *himation*. This is described for the first time by W. AMELUNG in *Röm. Mith.* 1901, pp. 21–32 (2 pls.; 1 fig.). It is shown to be a copy of an original of the second half of the fifth century B.C., and its connection with the Parthenon sculptures is apparent.

A Portrait of Pericles.—The sixty-first *Winckelmannsprogramm* of the Berlin Archaeological Society discusses a term of Pentelic marble brought from Lesbos, and now in the Berlin Museum. It is evidently a replica of the portrait of Pericles, well known from the terms in the Vatican and in the British Museum. The Berlin portrait resembles the replica in the Vatican more closely than that in London. The likeness of Pericles mentioned by Pausanias was a statue, not a term. This result is reached after careful discussion of the existing evidence. (*Ueber ein Bildnis des Perikles in den Königlichen Museen*. von REINHARD KEKULE VON STRADONITZ. Berlin, 1901, Reimer. 22 pp.; 3 pls.; 9 figs. 4to.)

The Aphrodite of Melos and the Base with the Inscription of Theoridas.—In *Sitzb. Mün. Akad.* 1901, v, pp. 708–714, A. FURTWÄGLER says that the inscription of Theoridas undoubtedly belongs to the herm of the bearded Dionysus in the Louvre (see *Am. J. Arch.* 1901, pp. 234, 465 f.), but Voutier's drawing of the base is incorrect. The inscription belongs to the first half of the fourth century B.C. Nothing proves that the inscription of . . . *αὐδῶς* of Antioch belongs to the other herm found with the Aphrodite. He still maintains that a column must have stood beside the Aphrodite. The statue and the herms were found in a niche, which was probably part of a gymnasium dedicated to Hermes. The Poseidon from Melos, now in Athens, has no connection with the other inscription of Theoridas found near it at the site of the sanctuary of Poseidon. The Aphrodite and the Poseidon are works of about the same date, both much later than the inscriptions of Theoridas.

Votive Relief from Rhodes in the British Museum.—In *Röm. Mith.* 1901, pp. 258–263 (fig.), W. AMELUNG argues, as against Perdrizet (*B.C.H.* 1899, pp. 559 ff.; cf. *Am. J. Arch.* 1901, p. 468), that in the said relief the female figure is Isis (as A. S. Murray had interpreted it), and the enthroned male figure may also be Sarapis, though that is not certain. A third figure, of which only the right arm holding a palm branch is preserved, is certainly a divinity, perhaps Nike. Amelung proceeds to point out the importance of the relief as an indication of the development of the style of sculpture toward that of painting.

Inscriptions on Professed Portraits of Famous Greeks.—CH. HUELSEN discusses the mediaeval collections of portrait herms and busts, and adds a critically edited collection of inscriptions thereupon in *Röm. Mith.* 1901, pp. 117–208 (2 pls.; 1 fig.).

The So-called Portrait of Sappho.—In *R. Arch.* XXXIX, 1901, pp. 301–307 (2 pls.), G. E. RIZZIO publishes a head in the Biscari Museum at Catania, which he associates with the herm in the *Galleria Geographica* of the Vatican. This latter is classed by Bernoulli among Portraits of Sappho, while Visconti regarded it as an Aphrodite. Rizzio discusses the so-called portraits of Sappho, and finds that they are not all the same type. Some of them are idealized portraits, while others are heads of a goddess. He suggests that the original of the Biscari head and the herm in the *Galleria Geographica* may have represented a nymph or a Muse. The head in Naples (*Mus. Borbon.* IV, 38, 1) is published without the restorations. It is a portrait, perhaps based upon an Aphrodite of about 420 B.C. No portrait of Sappho can as yet be identified.

The Statue on the "Burnt Column" in Constantinople.—In *Hermes*, XXXVI, 1901, pp. 457–469, THEODOR PRAGER writes of the statue which

once stood on the column in the forum at Constantinople. This statue represented Helios, and was set up by Constantine, who identified himself with the god. Tzetzes ascribes the statue to Phidias, but his testimony is in this case worthless. The statue probably came from Ilium, and is to be ascribed to the Hellenistic period.

The New Bronze Ephebus.—The statue of a youth found at Pompeii in November, 1900, is published and discussed by A. SOGLIANO in *Mon. Antichi*, X, 1901, pp. 641-654 (11 pls.; 5 cuts). It is a Polyclitan type modified by Attic feeling and by the living model, and belongs to the last years of the fifth century B.C. The silver coating and the object held in the hand were added not long before the destruction of Pompeii, when the statue was used as a lamp-holder.

Scene from the Iliad on Greek Sarcophagi.—In *Hermes*, XXXVI, 1901, pp. 393-403 (5 figs.), C. ROBERT discusses the representation on a sarcophagus found near Sparta between 1820 and 1830 (RAOUL ROCHETTE, *Mon. Ined.* pl. LIX, 2-5), which has since disappeared, and on fragments of other sarcophagi copied from the same original. The scene is, he finds, that of the conflict at the ships in the fifteenth book of the *Iliad*.

VASES AND PAINTING

Lessons from Greek Pottery.—JOHN HOMER HUDDILSTON has published a series of chapters on the lessons to be drawn from Greek pottery by teachers and students of the classics who are not archaeologists. A bibliography of Greek ceramics is appended. After the introduction follow discussions of the light thrown by vase paintings upon Greek History, Greek Religion and Mythology, the Larger Arts, the Vocations and Pastimes of Men, the Life of the Women, Greek Dress, Education, War and the Warrior's Equipment, Burial Customs, Epic Poetry, Lyric Poetry, and Comedy. The inscriptions on vases are treated in a separate chapter. The bibliography is arranged by a systematic classification. (New York, 1902, The Macmillan Company, xiv, 144 pp.; 17 pls., among them four plates of vase-forms reproduced from Furtwängler's catalogue of the Berlin collection. 12mo. \$1.25.)

A Boeotian Vase at Bonn.—In *Athen. Mitth.* XXVI, 1901, pp. 33-37, pl. v; 2 figs.), F. POULSEN publishes a Boeotian vase of the geometric style, now in the University Museum at Bonn. It is a drinking-cup without a foot and with two high handles. The technique and ornamental filling are Boeotian. The vase is somewhat late, as the ornaments are secondary to a hunting scene, repeated with some variations on both sides of the vase. It represents a huge boar attacked by two hunters armed with double-headed axes and lance, dart or sword. The painter has tried to bring more life and movement into his work than is usual in the geometric style.

Scenes from the Iliad in Early Corinthian Vase Painting.—In *Hermes*, XXXVI, 1901, pp. 387-393, C. ROBERT shows that two Corinthian plaques (pinakes) in the Berlin Museum and a Corinthian vase are decorated with representations of scenes from the *Iliad*. The first (FURTWÄNGLER, *Vasensammlung*, No. 764; *Ant. Denk.* I, pl. 7, 15) represents a scene from the *aristeia* of Diomedes, *Iliad*, V, 297-310. Athena is acting as Diomedes's charioteer by anticipation of V, 835 ff. The second plaque is a mere fragment, which Robert regards as an illustration to the passage in *Iliad*, VIII, 261-334 (the *κόλος μάχη*). The vase referred to was formerly in the Van

Branteghem collection, and is published *Jb. Arch.* I. VII, 1892, pl. 1. The scene is that of *Iliad*, XIX, 303 ff. The Atridae, Odysseus, Nestor, Idomeneus, and Phoenix try to induce Achilles to break his fast. In the vase painting only Odysseus and Phoenix of these six chiefs are represented, but Briseis and other female captives are present. In the *Iliad*, XIX, 340-356, Athena gives Achilles nectar and ambrosia. In the painting, Thetis takes her place. The variations from the *Iliad* show not lack of acquaintance, but most intimate familiarity with the poem.

An Amphora of Transitional Style.—Two sorts of black-figured Attic amphorae have been recognized. In the one, the body of the vase is black, and the figures are in black upon a rhomboidal area left red. In the other the whole body of the vase is red, and the figures (and other ornamentation) are in black, but are not confined to a bounded area. Examples have been found of vases of the first sort that by their modified technique show the transition from the black to the red-figured style. No such transitional example of the second sort appears to have been known till P. HARTWIG (*Röm. Mitth.* 1901, pp. 117-122; 1 pl.; 1 fig.) described one which he bought in Rome, and which he attributes to Andocides. The persons represented are, on one side, a seated, draped Dionysus, before whom a nude satyr is kneeling; on the other, two maenads.

Painted Plaques from Eleusis.—In 'Εφ. 'Αρχ. 1901, pp. 1-50 (2 pls.; 3 figs.), A. N. SKIAS publishes two terra-cotta plaques in the form of stelae with gables. Both were found at Eleusis, and are adorned with scenes connected with the Eleusinian cult. Both are broken in pieces, but the first is almost entirely preserved. Both are in the red-figured technique, but in the first much white is used. The nearly square surface of the first plaque, below the pediment, contains nine figures: Demeter and Cora seated, a youthful male figure (Iacchus) and a female figure (Hecate), each holding two torches, Celeus, Demophon and Metaneira, Eumolpus, and his wife, the daughter of Celeus. The names, except Iacchus and Hecate, are somewhat doubtful. In the pediment are the upper parts of five figures, perhaps Hippotheon, his two daughters (or two nymphs), and two youths. Nearly all the figures have branches in their hands and wreaths of leaves on their heads. Three women have covered vessels on their heads. These are explained as *κέρναι*, and the possible interpretations of *κέρνος* or *κέρχνος* are discussed. Originally the *κέρνος* was a covered mixing-bowl in which the *κυκεών*, or mixture, was prepared. Afterward the word *κέρνος* was applied to other vessels used in religious ceremonies. Besides the *κέρναι*, branches, and wreaths, other Eleusinian symbols in this painting are the omphalos and two objects, perhaps bundles of twigs, arranged in the form of the letter X. Other representations of Eleusinian deities are discussed, especially in connection with the figure called Iacchus. The relations of Iacchus and Eubouleus to each other and to Pluto and Dionysus are explained. This plaque has an inscription, *Νυμνίον τῶν Θε[ῶ]ν ἀ[νέθηκεν]*. Some other letters scratched upon it are unexplained. The second plaque is much less well preserved. The pieces do not all join, and some of them may even belong to some other plaque. The best-preserved figure is the seated Demeter, before whom stands Cora. Iacchus and Triptolemus were also represented, though but little of either now remains. The Demeter and Cora recall the figures of the great Eleusinian relief. In the pediment were a figure in rapid

motion and some winged figures. At the left, just below the cornice which separates the pediment from the main field of the plaque, is a head in relief. A similar head was doubtless once in the corresponding place at the right.

Vases Used in the Eleusinian Cult.—Under the title *Μυστική Προστροπή Δήμητρος καὶ Περσεφόνης*, St. N. DRAGOMES publishes in *Athen. Mith.* XXVI, 1901, pp. 38–49, a discussion of the *Θυματήρια*, *Λίκνα*, and *Κέρχνοι*, with especial reference to the vases of peculiar form first published by Philios (*Εφ. Ἀρχ.* 1885, pp. 169–174) and the Eleusinian pinax published by von Fritze (*Εφ. Ἀρχ.* 1897, pp. 163–174). He first summarizes briefly the views of Philios, von Fritze, Kourouniotes, Rubensohn, and Skias, and then examines the testimony of the lexicographers, reaching the conclusion that the three words denote clay vases in common use at sacrifices and initiations. The three were used for similar purposes, the *θυματήριον* or *ἔσχαρίς* containing burning incense, the *λίκνον*, grains of wheat and seeds, the *κέρχνος*, *κέρνος*, or *κέρνον*, seeds, oil, honey, wine, milk, unwashed wool, etc. The pinax represents the true prayer for purification. On the right are the immortals Demeter and Cora, with the torch-bearers, Hestia and Iacchus; to them approach two women, with these vases on their heads, apparently advancing in the slow movement of the dance. They are attended by a youth bearing a torch, a boy with an oenochoe, and two bearded men with staves. These, however, are secondary characters; the inscription “Ν(ά)ννιον τοῖν θεοῖν ἀ[νέθηκεν]” shows that the women are the principal personages and are engaged in the solemn supplication of the great goddesses. The vases found in 1885 at Eleusis are properly called *κέρχνοι* or *κέρνα*; among them are *λίκνα* and *ἔσχαριδες* or *θυματήρια*; the latter with the lids pierced.

Throwing the Javelin at a Shield.—The thirtieth programme of the Museum of the History of Art of the Würzburg University is entitled *Zu den griechischen Agonen*. The author, PAUL WOLTERS, publishes a flat-bottomed alabastron from Eretria on the front of which two horsemen are represented evidently engaged in a contest of javelin throwing at a shield. For the form of the vase several vases from Cyprus are compared. The handle has the form of cords tied in a knot—the so-called Heracles knot, originally a simple square knot. The form of the knot is discussed. A vase in the Louvre (MILLIN, *Peintures des vases antiques*, I, pl. 45) is republished, on which a similar contest is depicted. Welcker's opinion that javelin throwing at a shield was the chief contest at the Argive Heraea is disproved. Such a contest existed at various places, among others at Athens.

Iris or Bendis?—In *Hermes*, XXXVI, 1901, pp. 403–404, C. ROBERT calls attention to the headdress of Iris on the vase in St. Petersburg with a representation of the Judgment of Paris. This headdress resembles a fish fin or a cock's comb. On the ground that such a headdress could be worn only by a Thracian, B. Graef, *Hermes*, XXXVI, pp. 97 ff., called a figure on a Melian vase (*Monuments Grecs*, 1875, pls. i, ii; *Wiener Vorlegebl.* Ser. VII, pl. 7) Bendis; Robert contends that it is Iris.

Vases from the Acropolis at Athens; Imitation of Metal.—In *Athen. Mith.* XXVI, 1901, pp. 50–102 (pls. ii–iv; 82 cuts), C. WATZINGER describes the small objects, except those of stone, which were found in the German excavations on the west slope of the Acropolis. For the most part

these are fragments of Megarian and other ware of the third century B.C., but one Mycenaean dish of a new form, some red-figured fragments, relief ware of the fourth century B.C., and a few pieces of Greek *terra sigillata* are first described. The fragments of 'Megarian bowls,' including the few fragments from the Acropolis, are briefly described with reference to (a) the decoration of the edge, (b) the decoration of the body, including the merely ornamental, and that with figures, and (c) the decoration of the foot. The greater part of the article is occupied with the discussion of a special group of vases, of which thirty-four examples from various museums as well as from the excavations are described and illustrated. Three groups are distinguished: in one the vases are covered with the fine Attic black metallic lustre, in the next this has become much poorer, a sort of grayish-black, and finally the glaze paint is gray or red. The development seems to have ended in the red-ware glaze. The course of development indicated by the color is confirmed by the decoration, which at first is geometric, and later shows naturalistic elements, such as cornucopiae, dolphins, bucrania, garlands, etc., and these again give place to engraved geometric patterns. For these ornaments two colors are used: a thick dirty yellow and a thin chalky white. In the older examples the part of the vase not covered by the black glaze is colored dark red. These vases succeed the Attic vases of the end of the fourth century, where gilded or yellow garlands appear on the black ground. The development of the various forms of this class in their close dependence upon and imitation of the toreutic forms, and also their relations to the "Calener Schalen" and 'Megarian' bowls are discussed at length and illustrated by a mass of examples. The metal and clay vases are found in Asia Minor, Lower Italy, Boeotia, and Russia, but nowhere any metal forms which resemble those of Alexandria, so that it is probable that the metal original of this style was developed somewhere on the coast of Asia Minor.

Illustrations to a Greek Novel. — In *Hermes*, XXXVI, 1901, pp. 364–368, C. ROBERT discusses the wall paintings from an ancient house near the villa Farnesina, which Mau (*Röm. Myth.* X, 1895, pp. 231 ff.) explained as illustrations of the fabulous judgments of the Egyptian king Bocchoris. Robert sees in the paintings illustrations of a Greek novel of travels and adventures of two comrades, and finds herein a new proof that the novel existed in the Augustan period.

Niobe in a Pompeian Painting on Marble. — In *Hermes*, XXXVI, 1901, pp. 368–387, C. ROBERT discusses a Pompeian painting on marble (*Giornale degli scavi di Pompei, nuova serie*, II, tav. 9; Engelmann, *Bilder-atlas zu Ovids Metamorphosen*, Taf. ix, No. 67; *Lex. Myth.* III, p. 410, fig. 7). Niobe is trying to shield one of her daughters, while a nurse supports another who is dying. These groups are before a building with columns and antae. The scene is clearly derived from the theatre. The *Niobe* of Sophocles is recognized as the play illustrated in this painting. Fragments of the *Niobe*, published by Grenfell and Hunt (*Greek Papyri*, second series, p. 14, No. VI a), make this certain. Dörpfeld's theory of the Greek stage is supported by the building represented in the picture, the original of which was evidently famous, as it is imitated in sarcophagus reliefs and to some extent in the famous Florentine group of statues. The St. Petersburg relief (*Friederichs-Wolters*, No. 1866) is an eclectic work.

INSCRIPTIONS

The Ε at Delphi.—In *Hermes*, XXXVI, pp. 470–489, W. H. ROSCHER maintains his previous position and brings new arguments to prove that the Ε at Delphi was equivalent to εἰ “go” or “come.” He arranges the inscriptions on the temple in two hexameters:

Εἰ. θεῶ ἦρα. Νόμοις πείθευ. Φεῖδεν σὺ χρόνιοι.
Γνώθι σεαυτόν. Μηδὲν ἄγαν. Ἐγγύα, πάρα δ' ἄτη.

In a note, p. 490, C. ROBERT expresses the opinion that the Ε had nothing to do with the proverbs. It was no longer understood in the fourth century B.C.

Asclepius at Athens.—In *Ἑφ. Ἀρχ.* 1901, pp. 97–112, S. N. DRAGOMES republishes and discusses the inscription (*C.I.A.* II, 1649) concerning the foundation of the cult of Asclepius at Athens. The fragments of the inscription had not been properly arranged heretofore. The following chronological results are reached: 420–419 B.C., consecration of the sanctuary (in a general sense); 419–418, suit about a part of the land and cessation of work in the sanctuary; 418–417, arrangement of the matter; 417–416, some work of unknown extent; 416–415, erection of the *thrinakos* or peribolus and preparation of the *hedōs* or temple; 415–414, building of some wall from the *xylopylion*; 414–413, building of the *xylopylia*, near which τὰ λοιπὰ τῶν ἱερῶν were placed; 413–412, planting and adornment of the whole *temenos*; 412–411, the bringing of the sacred things (τὰ ἱερά?).

Θεοὶ Ἐπικούριοι.—In *Hermes*, XXXVI, 1901, pp. 448–450, ADOLF WILHELM shows that the letters Θ Ε in the heading of *C.I.A.* I, 170, do not stand for Θεοὶ ἐπικούριοι, but are the remains of Θ[εοὶ · Ἀθ]ε[νῶν] τύχε. The heading of *C.I.A.* II, 814, reads Ε Ο, not Ε Θ, and is to be supplemented to read Θ[εοὶ] ε[ν] ε[ν]ε[ν].

Notes on the Text of the Parian Marble.—In *Cl. R.* 1901, pp. 355–361, J. ARTHUR B. MUNRO continues (see *Cl. R.* 1901, pp. 149–154) his discussion of the text of the Parian marble, proposing several corrections of Boeckh's readings, and attempting to explain the reasons for some apparent mistakes.

Hermes Kypharissiphās.—In *Hermes*, XXXVI, 1901, pp. 452–456, F. HILLER VON GAERTRINGEN corrects the reading of an inscription published by J. Demargne in *B.C.H.* XXIV, 1900, pp. 241 ff. Instead of Κυφαρίσσι Φακυλλάνιε, he proposes to read Κυφαρισσιφᾶ Κυλλάνιε. Not the hero Cyparissis or Cyparissus, but Hermes (the Cyllenian), with the epithet Κυφαρισσιφᾶς, is addressed. The occasion of the dedication was perhaps a successful theft.

Magnesian Studies. The Festival of Artemis Leukophryene.—In *Hermes*, XXXVI, 1901, pp. 491–515, OTTO KERN publishes the first of a proposed series of articles on Magnesia, the material for which is furnished by the Magnesian inscriptions. The festival of Artemis Leukophryene is here treated. It was established in accordance with the advice of the Delphic oracle, on account of an epiphany of the goddess, in 420–419 B.C. The date is given by the Stephanephorus at Magnesia (Zenodotus), the Athenian Archon (Thrasymphon), a Boeotian Citharoedus, who was victorious at the Pythian games, and the Messenian Hagesidamus, victor in the pancratium at Olympia. When the great festival was first celebrated is not certain. It was

probably in 202 or 203 B.C. The festival was one of the greatest in Asia Minor. It consisted of a sacrifice, *θυσία*, and musical, gymnastic, and equestrian contests, *ἀγὼν στεφανίτης ἱσοπύθιος μουσικὸς γυμνικὸς ἵππικὸς*. It was celebrated once in four years for half a century, perhaps longer.

Epigram from Astypalaea.—In *Hermes*, XXXVI, 1901, p. 450, ADOLF WILHELM, with the aid of an Epidaurian inscription (*Fouilles d'Épidaure*, 267) reads the inscription *I. G. Ins.* III, 212, as follows:

Πολλάκι καὶ] πρότερον τιμήσει παῖδα Φέρητος
 Κλείμβρο]τον ἀντ' ἀρετῆς Ἀστυπάλαια πατρίς·
 ἀντὶ ἀγαθῶ]ν δὲ ἔργων αὐτὶς στεφάνωσε δικαίως
 μείζονα τῇ]ς προτέρας ἀνταποδοῦσα χάριν.

The Letter of Antigonos to the Scepsians.—One of the inscriptions from Kurschunlu, published in *J.H.S.* XIX, 1899, pp. 350 ff., is a letter from Antiochus, of the year 311–310 B.C., announcing the conclusion of peace with Cassander, Lysimachus, and Ptolemy. In *Hermes*, XXXVI, 1901, pp. 450–452, W. DITTENBERGER proposes, in lines 21 ff., to read *ὄντων δ' [ῆ]μῶν τῶν πρὸς Κάσσανδρον καὶ Λυσίμαχον συντετελεσμένων, πρὸς (ᾧ) Πρεπέλαον ἐπεμψαν αὐτοκράτορα, κτλ.*, making Prepelaus the envoy, not the one to whom an envoy was sent.

Aristocreon, the Nephew of Chrysippus.—In *Ἐφ. Ἀρχ.* 1901, pp. 49–58, ADOLF WILHELM discusses the inscription (*C.I.A.* IV, 2, No. 407, DITTENBERGER, *Sylloge*, ed. 2, No. 481), in honor of Aristocreon of Seleucia, who has been identified with the nephew of the philosopher Chrysippus. He publishes an inscription of twenty-five lines, recently found at Athens, in honor of Aristocreon, who had assisted Athenians who came to Antioch, and had afterward come himself, *ἐπὶ σχολήν*, i.e. to study philosophy at Athens, where he had continued to show good will to the Athenians. The archon mentioned in this decree is Charicles; the clerk is of the deme of Rhamnus, therefore of the tribe Aiantis. This fact fixes the date in the year 239–238, if De Sanctis (*Riv. di Filologia*, XXVIII, pp. 6 f.) and Kirchner (*Götting. Gel. Anz.* 1900, p. 446) are right. The epigram quoted by Plutarch (*De Stoic. Repugn.* p. 1033 E) should read *Τὸν νένον Χρύσιππον Ἀριστοκρέων ἀνέθηκε*, not *Τόνδε νέον κτλ.* The word *νίννη* is found in *C.I.G.* 1994 g, and an inscription containing the word *νένον* is published in this article. According to Pollux, *νέννος* is an uncle on the mother's side.

Officials and Festivals at Epidaurus.—In *Ἐφ. Ἀρχ.* 1901, pp. 57–82, P. CAVVADIAS publishes an inscription found in a house of Roman date at Epidaurus. It gives, in abbreviated form, the votes of the *κατάλογοι τῆς βουλῆς* in full meeting, in the month of Apellaios, for seventeen years, recording the appointment or election of proxenoi and *θεαροδόκοι*. Some of those mentioned are appointed to both offices, some only to that of proxenos. The *κατάλογοι* correspond nearly to the prytanes at Athens. The *θεαροδόκοι* were appointed to receive messengers from the temple of Asclepius, and to promote the worship of the god in other cities. They were probably present in Epidaurus at the time of their appointment; and since the office entailed some expense upon them, they were probably men especially interested in the worship of Asclepius. Their presence at Epidaurus at the same time in the same month was doubtless due to the celebration of the Asclepieaea, which therefore took place in the month of Apellaios, corresponding to the Attic

Scirophorion, our June or July. This also fixes the time of the Isthmian festival, which is known to have been nine days before the Asclepieaea. The four tribes of Epidaurus were the Dymanes, Hylleis, Azantii, and Hysminaei. The names of thirty-two phratritae are given. The senate of the Epidaurians did not regularly meet in full session, but was divided probably into four tribal divisions for ordinary purposes, meeting in full session, however, at the time of the Asclepieaea. The inscription, which is somewhat fragmentary, and in many places illegible, is discussed in detail.

The Inscription B. C. H., 1891, p. 430. — In *Berl. Phil. W.*, September 14, 1901, R. PEPPMÜLLER discusses the reading and interpretation of the inscription from Stratonicea (Eski-Hissar) published by Cousin in *B.C.H.* 1891, p. 430.

An Orphic Formula. — In *R. Arch.* XXXIX, 1901, pp. 202-212, S. REINACH discusses a series of gold plates with Orphic inscriptions (see DIETERICH, *De Hymnis Orphicis*; FOUCART, *Recherches sur les Mystères d'Éleusis*). The text is doubtful in part. The expression *ἐριφος ἐς γάλ' ἔπετον* is especially discussed. *Ἐριφος*, kid, is a title of Dionysus. The formula is explained: *ἐριφος* (I have become a kid) *ἐς γάλ' ἔπετον* (and I have found milk).

Greek Inscriptions from Egypt. — Twelve Greek inscriptions from Egypt are published and discussed by J. G. MILNE in *J.H.S.* XXI, 1901, pp. 275-292. Among the points noted are the use of an epithet *πολιεύς* for Sarapis, the identification of Osiris and Sarapis, a contribution of private funds for the erection of a statue of Sarapis, the use of an unhellenized name of an Egyptian goddess, of the name Tryphaena for the wife of Ptolemy XIII, and of an Egyptian compound deity, Hermes-Heracles, the existence of a theatrical gymnastic association in the third century after Christ, the dedication of a building to Hera by two Egyptian physicians, a dedication to Artemis of Perga, probably by Pamphylians at Naucratis, a dedication to Hermes by an association of ephebi, and a curious assemblage of Canopic gods (a style hitherto known only for Isis and Osiris) in connection with quotations from Homer.

GENERAL AND MISCELLANEOUS

Prehistoric Crete. — In the *Chron. d. Arts*, 1901, Nos. 25-29, July 13 and 27, August 10 and 24, September 7, S. REINACH continues his account of discoveries in Crete. (See *Am. J. Arch.* 1901, p. 474.) These chapters are devoted to recent discoveries, especially Mr. Evans's investigations into the Cretan alphabet, and the derivation from it of the Phoenician alphabet, and his discovery of the palace at Cnossus. The importance of these discoveries, which bring before us a European civilization at a time as early as 2000 B.C., is emphasized.

The Neolithic Settlement at Cnossus. — In *Man*, December, 1901, is an illustrated article by A. J. EVANS on 'The Neolithic Settlement at Knossos and its Place in the History of Early Aegean Culture.' The neolithic settlement has left remains which lie underneath the remains of the Kamáres or early metal-age period. These are found below the remains of the transitional period, between the Kamáres and the "Mycenaean" ages, which are below the "Mycenaean" remains. The lowest limit of the neolithic settlement was probably not later than 3000 B.C. (*Biblia*, January, 1902, pp. 328-330.)

The Double Axe and the Labyrinth. — In *J.H.S.* XXI, 1901, pp. 268–274, W. H. D. ROUSE points out that Mr. Evans's theories on the sacred character of pillars and of the double axe as a symbol of Zeus, on the connection between *labrys* and labyrinth, and the identification of the Cnossian palace with the labyrinth, rest on very insecure foundation, because they take into account only a small part of the evidence.

Stone Utensils from the Peloponnese. — In *Ἐφ. Ἀρχ.* 1901, pp. 85–90 (pl. v), CHR. TSOUNTAS publishes four stone axe heads found near Anemodouri, at the foot of the hill at the south of the plain of Megalopolis. Relics of the stone age are rare in Greece. The circumstances of the discovery tend to show that these axes were not in a grave, but were buried with some religious intent. A fifth axe, found near the ancient Caryae, in Laconia, is also published. It shows signs of much use, which the others do not.

The Marathonian Votive Monuments of the Athenians at Delphi. — In *Sitzb. Mün. Akad.* 1901, III, pp. 391–411, A. FURTWÄGLER assigns the stoa of the Athenians, which was built in front of the polygonal wall, to the time immediately after the successes of the Athenians against the Thebans and Chalcidians in 506 B.C. Its columns were of Parian marble, its upper parts of wood. The treasury of the Athenians, mentioned by Pausanias, stood on a terrace, once larger than it now is, where the sacred way made a turn. The original inscription—now lost—was on a curb or step, below the treasury, running parallel to the sacred way. The treasury and the offerings connected with it were erected soon after the battle of Marathon. The large group of Miltiades, Athena, Apollo, and the ten Attic heroes had an inscription stating that it was erected from the spoils of Marathon, and Pausanias adds that it was a work of Phidias. It was, however, erected about 366, and was intended to emphasize the humiliation of Sparta, for the Spartan monument of Lysander stood opposite. The monuments erected by the Arcadians and the Argives at the same time were intended to form, in moral effect at least, a group with the Athenian monument. The composition of the Athenian group of statues and the great niche in which it stood can belong to no time before the fourth century B.C. The great niche to which the Athenian group of statues is here (following Bulle and others) assigned, is marked by the foundations of what Homolle now regards as the base of the ex-voto of Lysander.

The Ex-votos of Lysander at Delphi. — In *C. R. Acad. Insc.* 1901, pp. 668–686, TH. HOMOLLE discusses Lysander's votive statues at Delphi. He publishes with corrections the inscriptions from the great group of Lysander and his *naumarchoi* (*B.C.H.* 1897, XXI, pp. 285 ff.), and adds new fragments. The great group consisted of nine bronze figures in front and twenty-nine smaller ones, placed somewhat higher, behind. The total length of the base was about 19.60 m. The only remains of a foundation of this size are at the right as one ascends the sacred way. The arrangement of the monuments along the sacred way is then: at the right, the Bull, the Ex-voto of Arcadia, the Ex-voto of Lysander, the Hemicycle of the Kings of Argos; at the left, the three new Eponymi of Athens, the Ex-voto of Marathon, the Trojan horse, the Epigoni, the Seven, Amphiarus. Near the north-east corner of the *temenos* of Apollo a base was found with the following inscription:

Εἰκόνα ἐὰν ἀνέθηκε[ν ἐπ' ἔργ]ω[ι τ]ῷιδε, ὅτε νικῶν
 Ναῦσι θαῖς πέρσεν Κε[κ]ροπιδᾶν δύναμιν
 Λύσανδρος, Λακεδαί[μο]να ἀπόρθητον στεφανώσα[ς]
 Ἑλλάδος ἀκρόπο[λιν, κ]αλλίχορον πατρίδα.
 Ἐξάμο(ν) ἀμφιρύτ[ου] τεύξε ἐλεγείον Ἴων.

Here *ἐξάμου* is for *ἐκ Σάμου*. This epigram adds a new poet, Ion of Samos, to the Greek Anthology. He may be the author of another epigram in honor of Lysander (Paus. VI, 314; Preger, *Inscr. Gr. Metricae*, No. 146). This base is of the same material as the base of the group of bronze statues, but cannot have formed a part of it. Probably it is the base of the marble statue of Lysander, mentioned by Plutarch, *De Pyth. Orac.* p. 33, 17 (Cicero, *De Divinatione*, I, 34, 75; II, 32, 68), which probably stood near the great altar.

Eros and Psyche.—In *Röm. Mitth.* 1901, pp. 57–93 (4 figs.), E. PETERSEN has an article on Eros and Psyche in art. He makes three classes. First, Psyche alone, an allegory, the young girl representing the soul distressed by love. Secondly, Eros and Psyche together. In the earlier representations Eros is not the lover, but the personification of the soul's love, and appears as a child, while Psyche is a girl of maturity. In a later type Eros is as old as Psyche, and is her lover, but the original of the Psyche in these groups is Nike. The early association of Eros and Nike is very clear, but this connection was forgotten, and the girl came to be regarded as Psyche. The Capitoline group is the best known example of this type. The third class contains representations of Eros alone.

The Σχῆμα Τριαινῆς in the Erechtheum.—In *J.H.S.* XXI, 1901, pp. 325–333 (2 cuts), M. P. NILSSON shows some marks in the form of a trident which exist on the rock under the northwest corner of the west cella of the Erechtheum, and which correspond better than the three holes under the north porch to Pausanias's expression, *σχῆμα τριαινῆς* (I, 26. 6). Disagreeing with Dörpfeld and others, he argues that Pausanias entered from the north porch, and that the *διπλοῦν οἶκημα* which contained the altars of Poseidon-Erechtheus and of Butes was the west cella with the space beneath its floor, where were the salt pool and the trident marks.

Ancient Greek Tachygraphy.—In *J.H.S.* XXI, 1901, pp. 238–267 (pl.; bibliography), F. W. G. FOAT briefly reviews the most recent German books on ancient Greek shorthand and the present meagre knowledge of the subject, calls attention to an unused piece of evidence, a wax-book in the British Museum, and suggests the probable relations of the different ancient systems.

Theoxeniae and the Flight of the Dioscuri.—In *R. Arch.* XXXIX, 1901, pp. 35–50 (1 fig.), S. REINACH maintains that the rite of theoxenia is derived from the primitive conception of the gods as relatives of those who entertain them, and was originally intended to ensure the friendship and protection of the gods who were entertained at table. The rite was frequently associated with the Dioscuri, who are represented as clad in white and coming through the air on white, wingless horses. The Dioscuri were originally swan-gods, hence the white color, but were contaminated with horseman-gods. One of the original deities later united in the person of Apollo was also a swan, as was one of those united in the person of

Aphrodite. The *hansas* of the Vedas and swan myths of northern peoples are cited in comparison.

Plaques without Background.—In *R. Arch.* XXXIX, 1901, pp. 178–182 (1 fig.), A. DE RIDDER discusses the use of plaques without background (plaques découpées) in Greece. A black-figured hydria in the Museo Gregoriano has upon it a picture of a fountain. From column to column extend slender bars, apparently to strengthen the structure. Above these are represented birds and serpents. In real fountains there must have been something to correspond to these, and de Ridder thinks the archaic plaques without background found in Greece were used as ornaments for fountains and for other structures which offered a similar empty space for decoration. So on two vases in Boston a lion and a lioness are represented upon the rounds of chairs.

A Silver Rhyton in Trieste.—In *R. Arch.* XXXIX, 1901, pp. 153–157 (3 pls.), L. DE LAIGUE publishes a silver vase in the museum at Trieste. It was found at Tarentum as early as 1889. It represents the head of a deer (*ceruus dama*). The work is realistic and very fine. About the neck is a relief representing a half-nude, bearded man, drawing toward him a young woman who is throwing back her veil. At one side stands Athena, at the other a bearded man. Perhaps the scene is the union of Poseidon with Saturaia, the daughter of Minos, from which Taras, the mythical founder of Tarentum, was born. The work appears to date from the fourth century B.C.

The Thymelici and the Scaenici.—In *Hermes*, XXXVI, 1901, pp. 597–601, E. BETHE brings forward arguments—including the inscriptions *B.C.H.* XXIV, 1900, pp. 93 ff. and p. 287, pl. iii (cf. DITTENBERGER *Sylloge*², No. 700)—to prove that from the end of the fourth century B.C., the *thymelici* performed their dances, songs, and other acts in the orchestra, the *scaenici* on the stage or *λογέιον*.

Illustrations to Plutarch's Lives.—In his translation of *Plutarch's Lives of Themistocles and Aristides*, with introduction and notes (Scribner's, 1901), B. PERRIN has inserted excellent publications of the potsherd inscribed with a vote for the ostracism of Themistocles, a Magnesian didrachm of the coinage of Themistocles, an Athenian didrachm (527–430 B.C.), two Athenian bronze coins of Roman date, showing the monument erected after the battle of Salamis, and a Magnesian bronze of Antoninus Pius, showing the statue of Themistocles. These illustrations give the volume an archaeological interest in addition to the literary value of the text.

Telesphorus.—In the *R. Ét. Gr.* 1901, pp. 343–349 (cf. *C. R. Acad. Insc.* 1901, p. 569), S. REINACH discusses the little god Telesphorus. He finds that his name is not Greek, though it sounds Greek, and that the god was probably a Thracian deity, who came to Greece only after the time of the Diadochi. His costume—a long cloak with a hood—belongs to a cold region.

The Principality of Samos.—In the *Bulletin* of the Royal Belgian Geographical Society, 1901, pp. 4–32, 81–124, 177–200, HENRY HAUTECEUR gives a description of the Principality of Samos. The articles contain passages of some value to the student of ancient Samian topography and history.

Athens in the Seventeenth Century.—In the *R. Ét. Gr.* XIV, 1901, pp. 270–294, H. OMONT publishes an account by the Capuchin priest Robert de Dreux, of a visit to Athens in 1669, and letters of Jacob Spon and Father Babin, besides a letter to Spon from a Norman traveller, Louis Touroude.

These documents mention several of the monuments at that time existing at Athens, but contain little real information.

The Date of the Destruction of the Propylaea.—In *Cl. R.* 1901, pp. 430 f., J. R. WHEELER, commenting on the fact that Spon gives a date (1656) for the destruction of the Propylaea about ten years later than that given by the three other existing authorities, thinks it quite likely that Spon made a mistake.

ITALY

ARCHITECTURE

The House of P. Fannius Sinistor.—The commission appointed to investigate the frescoes in the house discovered by De Prisco at Grotta Franchini, near Boscoreale (see *Am. J. Arch.* 1901, p. 102), reports that the frescoes should be bought by the state. The report is accompanied by a memoir by F. Barnabei. In this the topography of the place, the neighboring villa della Pisanella (where the silver treasure now in the Louvre was found), the general plan of the villa of Fannius, the peristyle, the "hall of the musical instruments," the tablinum, the large triclinium, the summer triclinium, the ordinary triclinium, and the cubiculum are described and discussed in detail. The house is called the villa of Fannius because the name of P. Fannius Sinistor was found inscribed upon the rim of a large broken jar. (*La villa Pompeiana di P. Fannio Sinistore scoperta presso Boscoreale. Relazione a S. E. il Ministro dell' Istruzione Pubblica. Con una Memoria da FELICE BARNABEI.* Rome, 1901, press of the R. Accademia dei Lincei. 86 pp.; 11 pls.; 19 figs. 4to.)

A Roman Bath.—At Massaciuccoli, near Viareggio, are remains of an ancient brick structure, commonly regarded as a temple of Hercules. This has been recently studied by G. PELEGRINI, who shows that it was a Roman bathing establishment, and is on the site of the ancient Fossae Papirianae. (*Not. Scavi*, 1901, pp. 194–200; 3 figs.)

SCULPTURE

Odysseus and Diomedes.—In *Röm. Mitth.* 1901, pp. 33–41 (pl.), E. PFUHL describes a marble head in the Museo delle Terme (HELBIG, *Führer* II, 1031). It represents a bearded man, and is an early empire copy of a bronze original. The writer compares it especially with the Diomedes, of which the best copy is in the Munich Glyptothek, and seeks to prove that the original of the head was a statue of Odysseus, forming with the Diomedes a group that represented the meeting of the two men after the theft of the Palladium.

The So-called Statue of the Emperor Julian.—In *R. Arch.* XXXIX, 1901, pp. 259–280, ÉTIENNE MICHON, after calling attention to the fact that only one inscription at Acerenza refers to Julian, and that the bust on the cathedral (see above, p. 74) has been supposed to represent St. Peter, not St. Canio, discusses the statue in the Louvre which had been called Julian. He concludes that the statue represents not Julian, but some priestly personage, and cites in comparison the head from Ephesus with a peculiar diadem (*Jh. Oesterr. Arch. I.* 1899, pp. 245–249; pl. viii).

The Trustworthiness of Flaminio Vacca's Memorie.—The trustworthiness of Vacca's memoirs is further established by CHR. HUELSEN in

Röm. Mitth., 1901, pp. 264-269 (fig.), who points out that there exists to-day in the Museo Civico at Modena (No. 391) a fragment of a relief, the discovery of which is chronicled by Vacca, who said it represented an old man in a *culla* (*sella gestatoria*), carried by *fanciulli* (*amores*), and was inscribed below IN SENECTVTE ME BAIVLANT. It had been supposed by some that Vacca must have misinterpreted Silenus riding on an ass.

A Sketch-book of Giulio Romano. — In *Röm. Mitth.*, 1901, pp. 209-243 (4 pls.; 1 fig.), C. ROBERT describes minutely, and gives full index of a sketch-book of ancient sculpture attributed to Michael Angelo, but really by Giulio Romano, now in the collection of engravings of the Schloss Wolfegg in Württemberg. The sketches were made in Rome between the years 1516 and 1526, doubtless as inspiration for certain of the artist's paintings, in which indeed some of the sketches can be traced.

VASES AND PAINTING

Chronology of Vases in Campania. — In *B. Paletn. It.* 1901, 41-56 (2 pls.), G. PATRONI describes vases found at various times in three cemeteries in the valley of the Sarno, — at S. Marzano, S. Valentino, and Striano. The conclusions are as follows: The manufacture of Campanian bucchero began with the Etruscan domination, about 800 B.C., and was fully developed when the first proto-Corinthian vases were placed in tombs of the seventh and early sixth centuries. Preceding the Etruscan-Campanian period was an Umbrian-Campanian period, represented by two vases of Villanova type, found at Striano.

The Amores in the House of the Vettii at Pompeii. — AUGUST MAU defends (*Röm. Mitth.* 1901, pp. 109-116; 1 fig.), against Talfourd Ely, Grueber, Seltmann, and Svonoros, his previous view, that a certain group of the *amoretti* are represented as goldsmiths and not as money-coiners.

INSCRIPTIONS

The Reigns of Vespasian and Titus. — *The Epigraphical Evidence for the Reigns of Vespasian and Titus* is the title of No. XVI of the *Cornell Studies in Classical Philology*. The compiler, HOMER CURTIS NEWTON, has brought together 366 inscriptions, nearly all Latin, relating to Vespasian and Titus. Notes are added when considered necessary. (New York, The Macmillan Company. viii, 140 pp. \$0.80.)

Dates of the Salutations of Nero. — In *R. Arch.* XXXIX, 1901, pp. 167-177, ÉDOUARD MAYNIAL arrives at the following dates for the imperial *salutationes* of Nero: I. October 13, 54 A.D. II. End of 55 A.D. (first successes of Corbulo against the Parthians). III. Spring of 57 A.D. (victories of Dubius Avitus in Frisia). IV. Spring of 58 A.D. (Parthian war; capture of Volandum). V. Date uncertain (victories of Dubius Avitus over the Amsibarii). VI. September, 59 A.D. (Parthian war; capture of Tigranocerta). VII. Summer of 60 A.D. (Parthian war; Corbulo establishes Tigranes in Armenia). VIII. Winter, 61 A.D. (victories of Suetonius Paullinus over the Britons). IX. Summer, 61 A.D. (Parthian war; Corbulo expels Vologesus from Armenia). X. Beginning of 66 A.D. (Parthian war; final victory over Tiridates). XI. Middle of 66 A.D. (journey of Tiridates to Rome). XII. Summer, 67 A.D. (Jewish war; Vespasian's victories). If there was a thirteenth *salutatio*, it was probably toward the end of 67 A.D.

Roman Military Diplomas.—In *Biblia*, January, 1902, pp. 315–318, JOSEPH OFFORD calls attention to the importance of Roman “military diplomas,” and the light they shed upon the history of the Roman Empire.

Pompeian Graffiti.—In *Rend. Acc. Lincei*, 1901, pp. 256–259, A. SOGLIANO calls attention to three Pompeian *graffiti*, containing *ισοψηφίαι*; that is, numbers made by using the numerical value of letters forming a name. Other well-known examples of the same device are briefly discussed.

Inscriptions relating to Roman Antiquity.—In *R. Arch.* XXXIX, 1901, pp. 139–152, R. CAGNAT and M. BESNIER publish forty-two inscriptions relating to ancient Roman matters. Seven of these are in Greek. References to the periodicals and monographs in which the inscriptions first appeared are given. A few articles and monographs on Roman epigraphy are mentioned. *Ibid.* pp. 447–481, the publication is continued, and 153 inscriptions which had appeared in various periodicals and monographs in 1900 are reprinted with occasional brief notes. Indices are added.

GENERAL AND MISCELLANEOUS

A Primitive Weapon.—In *B. Paletn. It.* 1901, pp. 69–73 (fig.), G. A. COLINI discusses certain stones of the neolithic period, of spherical or oval form, each having a hole to receive the end of a stick that served as a handle. The use of this primitive weapon was probably diffused from some Oriental centre.

Primitive Settlements in Apulia.—In Apulia, near Altamura and Gravina, V. DI CICCO has studied many artificial caves and mounds which had been used as dwelling-places by a primitive people. There are tombs of various periods in the neighborhood. On a hill near Gravina are many traces of an old settlement, including fragments of the surrounding wall. (*Not. Scavi*, 1901, pp. 210–222; 9 figs.)

The Necropolis of Remedello Sotto and the Eneolithic Period.—In *B. Paletn. It.* 1900, pp. 202–267 (10 figs.), G. A. COLINI continues his article on the necropolis of Remedello Sotto and the eneolithic period in Italy (cf. *Am. J. Arch.* 1900, p. 369). He discusses utensils of stone, and arms and utensils of bone. The latter were used in the neolithic, eneolithic, and bronze periods. He treats also utensils of copper and bronze, especially flat hatchets of copper that were characteristic of the eneolithic period. The use of metals, he concludes, was disseminated from southwestern Asia. *Ibid.* 1901, pp. 73–132 (5 pls.; 21 figs.), Colini discusses particularly knives or daggers of copper or bronze, describing many examples of various form and size found in Italy and Sicily, comparing them with other examples from other parts of Europe. The types are derived from the East, but the articles are of local manufacture. Some types remained in use in the age of bronze. These three facts are deduced: 1. Metal was known to the neolithic peoples a long time before the beginning of the bronze age. 2. The first weapons and utensils of copper are widely distributed in Europe, especially in the eastern part, and it is apparent that the use of metals was diffused from one or more centres, situated perhaps in southwestern Asia. 3. There is no gap between the neolithic period and the age of metals.

Este an Early Manufacturing Centre.—In *B. Paletn. It.* 1901, pp. 192–214 (2 pls.; 8 figs.), G. GHIRARDINI describes in detail the contents of a tomb excavated at Este in 1897. Most important was a large bronze *situla*,

decorated with a geometric pattern. This discovery, added to the fact that two similar vases have been previously found in the same locality, proves that Este was the most important centre for the production of such vases. The type of the cover, also of geometric ornamentation, comes from Bologna. The tomb is shown by its contents to be of the second half of the sixth century B.C.,—a time midway between the second and third periods of the archaic civilization of Este.

The Origin of the Mundus and the Templum.—In *Rend. Acc. Lincei* 1901, 5-6, pp. 127-148 (5 figs.), L. A. MILANI discusses a pre-Hellenic picture of the labyrinth of Cnossus, in which appear the *mundus*—represented by faces of the dead—and an altar, which is the primitive *templum*. Other works of art show the same combination. The conical stone and the inscribed stele under the *niger lapis* of the Roman Forum are essential parts of the *templum*, and here also was a *mundus*. The conception was first developed in Chaldaea, the origin of the *mundus* being the burial trench, that of the *templum* the monument erected above.

A Votive Bronze at Padua.—In January, 1899, near the church of S. Antonio at Padua, was found a bronze implement shaped like a shovel. On one side is the figure of a horse; on the other, an inscription, in two lines. The latter is unintelligible, but is evidently of a votive character. The implement is not later than the third period of the archaic civilization of Este, and is probably of the fourth century B.C. (G. GHIRARDINI, *Not. Scavi*, 1901, pp. 314-321; 4 figs.)

Zoömorphie Ornament in Venetia.—In the third of a series of articles on the early Italian *stirata* studied especially at Este, G. GHIRARDINI treats of the zoömorphie decoration, showing the derivation of all its elements from the Graeco-Oriental or Ionic art of the eighth and following centuries B.C., its strongly characteristic local development and decay in Venetia, and its spread in various directions, especially into Alpine and Central European regions. This decorative system seems to have come from the east, not by way of Etruria and the Apennines, as did the geometric ornament and the form of the vessel itself, but directly through the Adriatic. (*Mon. Antichi*, X, 1901, pp. 5-222; 5 pls.; 64 cuts.)

Primitive Monuments of Sardinia.—Vol. XI, pt. II, of *Mon. Antichi*, pp. 5-280 (19 pls.; 146 cuts), is a study of the prehistoric antiquities of Sardinia, by G. PINZA, based on the remains now available, without special excavations. The nuraghi and other sepulchral structures and minor objects are shown to be local forms of a civilization, of Oriental origin, which spread to all the regions of the Mediterranean and the Atlantic coast about the end of the stone age, and persisted an unusually long time in Sardinia.

Primitive Bronzes from Sicily.—P. ORSI, in *B. Paletn. It.* 1900, pp. 267-285 (2 figs.), describes four collections of primitive bronzes—chiefly arms and utensils—found buried in various parts of Sicily. One collection contained pieces of copper resembling the *aes rude* or *aes signatum* of Italy.

Sicel Occupation of the Site of Gela.—In *B. Paletn. It.* 1901, pp. 153-163 (5 figs.), P. ORSI describes tombs and objects recently found in Sicily, at Gela, Montelungo, and Manfria, which prove that, long before the arrival of the Greeks, the Sicels held the hill on which Gela was built and the surrounding region.

Shapes and Stamps of Roman Terra-cotta Lamps.—In *Sitzb. Mün. Akad.* 1901, v, pp. 685-703 (pl.), J. FINK divides the Roman terra-cotta lamps in the Munich collection into four classes, according to the shape of the beak. I. The beak, rounded in front, projects strongly. At each side of the hole for the wick are snail-like volutes. II. The beak broadens and ends in an obtuse angle. The snail-like volutes are as in the first class. III. Beak as in I and II, but the top of the lamp is surrounded by a raised edge, which runs forward and round the hole for the wick. Projections on the lower part of the lamp pass through holes in the edge of the top, and are then pressed down to hold the top on. IV. The beak is merely a round or semicircular projection, in which is the hole for the wick. The reliefs on I are more important and more like Greek originals than on the other classes. A list of stamps is given. Each name is confined, with few exceptions, to one class. Classes I and II have usually no stamp. Class I seems to be the earliest. The reliefs and ornaments are in the taste of Magna Graecia. The ornamentation of Class II is more specifically Roman. Classes I and II show no Christian emblems; Class III belongs to the period from Augustus to Hadrian; Class IV is the latest. These results apply also, so far as Fink could ascertain, to lamps in other collections.

The Regulation of Vineyards under the Roman Empire.—In *R. Arch.* XXXIX, 1901, pp. 350-374, S. REINACH discusses Domitian's order prohibiting the planting of new vineyards. This is referred to in Revelation, vi, 6, written about 93 A.D. The order was rescinded so far as Asia Minor was concerned, but remained in force in Gaul until the time of the Emperor Probus.

The Groma.—The Roman instrument for laying out right angles, the *groma*, consisting of an upright rod, *ferramentum*, upon which a horizontal four-armed cross, *stella*, was fitted, has been known only from a grave relief at Ivrea and from ancient directions for its use. An actual specimen has now been found in the Limes excavation at Pfünz in Bavaria. It is evident that the *umbilicus soli* to be placed over the vertex of the angle was not the centre of the cross, but the end of one of the arms and the lines connecting that with the two adjacent arm-ends made the right angle. (H. SCHÖNE, *Jb. Arch. I.* XVI, 1901, pp. 127-132; pl.; 6 cuts.)

Hamilton's Excavations in the Eighteenth Century.—Gavin Hamilton's letters to Charles Townley, describing his excavations at Hadrian's Villa and other places near Rome up to 1792, with a list of the pieces of sculpture found and their possessors, are published, from manuscripts in the British Museum, in *J.H.S.* XXI, 1901, pp. 306-321, by A. H. SMITH. They supplement or correct, on some points, Dallaway's summary of the letters and the Townley inventories.

Excavations in the Roman Forum in 1788-89.—The excavations of C. F. v. Fredenheim in the Roman Forum (1788-89) are described by C. v. BILDT in *Röm. Mitth.* 1901, pp. 1-20 (plan; 4 figs.). They were successful in their purpose,—the determination of the southern boundary of the Forum. Work was begun over the part of the Basilica Julia that is bounded by the Vicus Jugarius. Besides the pavement of the basilica and a fragment of its stucco ceiling, many things were discovered, especially an inscribed marble block from the *Schola* near the Regia, containing the names of *Kalatores Pontificum et Flaminum*.

FRANCE

Vases with Relief Ornament in Gaul.—In *R. Arch.* XXXVIII, 1901, pp. 360-394 (37 figs.), J. DÉCHELETTE describes in detail fragments of moulds and vases with reliefs (*terra sigillata*) found six years ago at Saint-Rémy (Allier), near Vichy. The earliest of these are of yellowish color, and the decoration consists chiefly of systems of arches. Soon the red pottery appears, and the decoration develops into running vines. The date of these moulds is about the middle of the first century after Christ. Toward the end of the first century B.C. whitish ware, from a manufactory somewhere near Lago Maggiore, was imported into Gaul and also into Pannonia. This is often signed with the name ACO. At the same time Arretine ware was imported into Gaul. The potters at Saint-Rémy imitated, at first, the whitish ware. The chronological results reached in this article are obtained chiefly by comparing the objects of Saint-Rémy with those found at Andernach, at Mont Beuvray, and at Ornavasso. A fragment of a glazed vase, with a representation of the combat between Theseus and Hippolyta, is published. Hippolyta's girdle is held up in her left hand. Several medallions and figurines are discussed and published. One medallion represents Leda and the swan; another, Venus between two Cupids. Both are signed SIIXTVS. Several figurines represent Venus. Medallions and figurines are of the same date as the vases.

La Tène Pottery with Incised Decoration.—Gallic painted pottery with geometrical decoration is found in all parts of Gaul (except the provinces of the southeast and Armorica), on the Rhine, in western Switzerland, and at Stradonic. Pottery with incised geometrical decoration has been found in Brittany and in England. The specimens found at Glastonbury belong to the first century B.C. The original seat of this purely Gallic pottery was in Gaul, not in England. The painted Gallic pottery of the La Tène period is not influenced in style by Hellenic or eastern art, though the change from incised to painted decoration may have been caused by the importation of Greek ware. In Armorica and Britain the earlier method of decoration by incised lines and patterns survived after painted decoration was introduced in other parts of Gaul. (JOSEPH DÉCHELETTE, *R. Arch.* XXXIX, 1901, pp. 51-61; 4 figs.)

Celtic Cuirasses from Fillinges.—In *R. Arch.* XXXIX, 1901, pp. 308-315 (7 figs.), Count O. COSTA DE BEAUREGARD describes and discusses some bronze cuirasses found in 1900 at Fillinges, Savoy. They are ornamented with rows of repoussé disks, alternating with bands of diagonal hatchings. On two of the pieces is a sort of spiral, ending in a head like that of a bird. Similar work from Grenoble, Grésine, and elsewhere is compared.

Gallo-Roman Towns.—In the *Revue des Études Anciennes*, 1901, pp. 316-344, CAMILLE JULIAN discusses the names, relative importance, and characteristics of the Gallo-Roman *oppida* known. Especial importance is attached to the study of the names as they appear in the works of Latin writers and in mediaeval records.

The Great Oppidum of the Tolosates.—In *C. R. Acad. Insc.* 1901, pp. 518-521, LÉON JOULIN describes the remains of a large town of the second century B.C., near the confluence of the Ariège and the Garonne.

The fortifications were extensive; remains of houses, numerous amphorae, and other indications of a large population were found. The present site of Toulouse may have been inhabited at the same time. The great *oppidum* was deserted after the Roman conquest.

The Ramparts of Dax.—In the *Revue des Études Anciennes*, III, 1901, pp. 211–221 (1 fig.), C. JULLIAN writes of the ramparts of Dax (Latin Aquae), near the hot spring of the Nehe, which flows into the Adour. The fortifications, built in the fourth century after Christ, form an irregular quadrilateral, 445 m. on the east side, 410 m. on the west, 330 m. on the north, and 280 m. on the south. There were forty-six towers, and only three or four gates. The cathedral and the château are probably both of Roman origin. There was a bridge, in Roman times, across the Adour. The pagan and Christian cemeteries were outside of the walls.

Inscriptions of the Oise.—In *R. Arch.* XXXIX, 1901, pp. 237–258, SEYMOUR DE RICCI continues his publication of Latin inscriptions (see *R. Arch.* XXXV, 1899, pp. 103–125; *Am. J. Arch.* 1900, p. 371).^{*} After a few corrections of his former article, he publishes 143 inscriptions (Nos. 51–193) from various places in the *ager Bellovacorum*. Nos. 93–192 are stamps on pottery found at Hermes. *Ibid.* pp. 375–400, De Ricci publishes 32 additional inscriptions. Of these, 14 belong to the *ager Bellovacorum*, 7 to the *civitas Silvanectum*, 11 to the *civitas Suessionum*.

GERMANY

Early Man in the Neanderthal.—G. SCHWALBE (in *Jb. V. Alt. Rh.* 106 (1901), pp. 1–72; 1 pl.) has subjected the now famous skull of the Neanderthal to a new and thorough study, and concludes, with certain others, that the skull belongs to a type that is specifically, and perhaps even generically, different from that of recent man.

Pre-Roman Walls.—The investigation of the ancient fortification walls on the Rhine near Urmitz was continued in the winter of 1899–1900. The discovery of objects of the bronze age indicates that the fortification was constructed centuries before the arrival of the Romans. (HANS LEHNER, *Jb. V. Alt. Rh.* 1900, pp. 164–172; plan.)

Ancient Graves on the Lower Rhine.—In the *Jb. V. Alt. Rh.* 1900, pp. 1–49 (6 pls.), C. RADEMACHER gives a very systematic and complete account of the ancient graves on the lower Rhine. Beginning with a bibliography of the subject, which was first investigated by Theodor von Haupt in 1820, he goes on to describe the result of his own excavations in many places. The bones collected from the funeral fire were placed in an urn, which was then filled with sand and covered with a mound of earth. The mound sometimes contained other vases placed there as offerings. The vases contained nothing belonging to the dead, rarely objects offered by relatives and friends. The writer describes in detail the various types of tomb, and particularly the decoration of the vases.

The Cult of the Matronae.—A terra-cotta found in Bonn, representing three matrons bearing fruit, is described by MAX SIEBOURG in *Jb. V. Alt. Rh.* 1900, pp. 78–102 (pl.). They are probably the *matres domesticae*, corresponding to the *lares domestici* of the Romans. The writer discusses at length this cult of the *matronae*, which in various forms was wide-spread, and was common to Celts and Germans.

The Roman Fortress at Andernach.—The topography and history of the Roman fortress of Antunnacum (Andernach) is described at length by HANS LEHNER in the *Jb. V. Alt. Rh.* 107 (1901), pp. 1-36, with woodcuts and 3 pls.

Burginatum and the Legio I (Germanica).—The history of the legion and the topography of its station on the lower Rhine are minutely discussed by MAX SIEBOURG in *Jb. V. Alt. Rh.* 107 (1901), pp. 132-202 (cuts and 1 pl.).

Jupiter Dolichenus.—JOSEPH POPPELREUTER describes a bronze statuette, now in the Museum Wallraf-Richartz in Cologne, which he identifies as a Jupiter Dolichenus; K. ZANGEMEISTER publishes three Dolichenus inscriptions on votive plates of silver, now in the British Museum, but said to have been found at Hedderheim, and establishes the genuineness of a similar inscribed plate now in the Berlin Museum; and finally G. LOESCHKE begins, but does not finish, some comments on the character of the votive offerings made to Dolichenus, in *Jb. V. Alt. Rh.* 107 (1901), pp. 56-72 (figs. and 3 pls.).

Apis-worship on the Danube and the Rhine.—A. FURTWÄNGLER comments upon bronze statuettes of a bull with raised fore foot, evidently in motion, found in Greece and Italy, but more frequently in the regions of the Danube and the Rhine. Some show a crescent moon projecting from the head between the horns, and others a hole where such an attribute might have been attached. These are one and all figures of Apis, and the moon attribute is explicable from the story (Herod., Plut.) of the bull Apis as generated by a moonbeam. Other attributes which occasionally occur are also explained. (*Jb. V. Alt. Rh.* 107 (1901), pp. 37-45; figs.; 1 pl.)

BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

The Dignitaries of Antioch.—In the *R. Or. Lat.* VIII (1900-1901), pp. 116-157, E. REZ publishes a list of the constables, marshals, seneschals, viscounts, chancellors, chamberlains, stewards, dukes, and ecclesiastical patriarchs of Antioch from the end of the eleventh to the end of the thirteenth century.

Oriental Pottery with Metallic Lustre.—The metallic lustre exhibited on Moorish and Italian pottery is generally supposed to have originated in Persia, whose lustrous pottery is well known. Recent excavations in Cairo and in Syria seem to show that metallic lustre was produced in Egypt and on the banks of the Euphrates at an earlier date than in Persia. Such at least is the conclusion of GASTON MIGEON in an article entitled 'Céramique orientale à reflets métalliques' in the *Gaz. B.-A.* 1901, pp. 192-208.

The Building of St. Sophia.—In the *Byz. Z.*, 1901, pp. 455-476, TH. PREGER contributes an article entitled 'Die Erzählung vom Bau der Hagia Sophia.' Preger here considers the date, sources, and value of the treatise *Διήγησις περὶ τῆς οἰκοδομῆς τοῦ ναοῦ τῆς μεγάλης τοῦ Θεοῦ ἐκκλησίας τῆς ἐπονομαζομένης ἁγίας Σοφίας*. He shows that the contents of this treatise are more valuable than has been recognized by Du Cange, Salzenberg, or Swainson.

Marriage Ceremonial on a Byzantine Miniature.—Under the title 'Das Epithalamion des Paläologen Andronikos II' in the *Byz. Z.*, 1901, pp. 546–567, J. STRZYGOWSKI discusses the miniatures of a Greek manuscript (Vat. No. 1851) of the early fourteenth century in which are depicted the ceremonials of the wedding of Andronicus II in the year 1275. The manuscript is to be published and the miniatures reproduced in color under the editorship of Padre Ehrle.

Die Junker von Prag.—Such obscurity rests on the significance of the "Junker von Prag" as to give them the character of mythical beings. Kraus, Gurlitt, Carstanjen, and Neuwirth have attempted to solve the mystery. In the *Rep. f. K.* 1901, pp. 115–123, MAX BACH attacks the problem and concludes that they were artists in the broad sense, ranking with the most distinguished painters, and that they had much to do with the spread and development of the Gothic style.

ITALY

Ancient Testimony to the Martyrdom of St. Peter in Rome.—In an ancient Ethiopic apocryphal writing known as the *Ascensio Isaiae*, dating from the first century, in a reference to the persecutions under Nero occur the words, translated, "(unus) e duodecim in manum ejus [*i.e.* Neronis] tradetur." The expression was interpreted by Clemen in the *Zeitschr. f. Wissensch. Theol.* 1896, pp. 488 ff., as referring to the martyrdom of St. Peter. The *Amherst Papiri*, published by Grenfell and Hunt in 1900, give the same testimony in the Greek version. Recently the marble pavement between the altar and apse of S. Agnese has been removed, and amongst the fourth century graves was found a marble slab with a *graffito* of a bearded head under which is inscribed PETRVS. A corresponding head, with the inscription PAVLVS, as the other intercessor for the departed one, though probable, is now missing. (MARUCCHI in *N. Bull. Arch. Crist.* 1901, pp. 221–226.)

The Chapel called "Domine quo Vadis?"—In the *N. Bull. Arch. Crist.* 1901, pp. 5–25, G. B. LUGARI discusses the chapel "Domine quo Vadis?" He concludes that the chapel erected to commemorate the appearance of Christ to St. Peter was not, as is popularly supposed, the church of Sta. Maria, on the Via Appia, near the Via Ardeatina, but a circular building beyond it, which has now disappeared, although reconstructed in the sixteenth century. He suggests that probably from this building the stone with the poorly sculptured impress of footmarks was removed to the church of S. Sebastiano.

Stamped Tiles from Sta. Croce in Jerusalemme, Rome.—The inscriptions stamped upon the roofing tiles of the church of Sta. Croce in Jerusalemme in Rome form an unusually varied and interesting series. P. CROSTAROSA begins an inventory of these inscriptions in the *N. Bull. Arch. Crist.* 1901, pp. 119–144.

The Child Veneriosa as an Orante.—In the *N. Bull. Arch. Crist.* 1901, pp. 27–34, G. BONAVENTÀ publishes a marble slab from the cemetery of S. Ermete. A child is here represented as an Orante. The inscription reads: HIC EST POSITA BCNERIOSA NEOFITA QVE VICXIT AN · VI · DC · VIII ID · AVG · Besides the crudities of the relief and inaccuracies of the inscription, Bonavenià calls attention to the fact that

the figure is not an abstract representation of the soul, but the image of a definite individual, the child Veneriosa, six years old.

The Frescoes of Sta. Maria Antiqua, Rome.—In the *R. Art Chret.* 1901, pp. 300–313, 328, GERSPACH gives the arguments for identifying the church recently discovered in the Forum as Sta. Maria Antiqua, and describes in detail the frescoes with which this church was so elaborately decorated. As these frescoes date from the eighth and ninth centuries, they form an important link in the history of Italian painting. He finds here tempera painting as well as fresco and color harmonies as pleasing as those of the fourteenth century. An experiment, the application of formaline, for the preservation of the frescoes has been apparently most successful. His fear that it would injure tempera painting is probably groundless. Père Duchesne, head of the French School at Rome, now accepts the identification of the church as that of Sta. Maria Antiqua. (*N. Bull. Arch. Crist.* 1901, pp. 39–45.) The church is described by T. M. LINDSAY in *Biblia*, August, 1901, pp. 152–159.

The Pisan Pulpits at Cagliari.—In *L'Arte*, 1901, pp. 204–207, DIONIGI SCANO discusses the two pulpits at Cagliari, and concludes that they antedate the period when Fra Guglielmo coöperated with Nicola Pisano, and that consequently they must be assigned to another sculptor.

A Thirteenth Century Mitre.—In *L'Arte*, 1901, pp. 145–151, CARLO CIPOLLA publishes a mitre from the church of San Zeno at Verona. On one side is embroidered a figure of Christ and busts of six apostles; on the other a figure of the Virgin and busts of the rest of the Apostles. From the lettering of the names the mitre may be assigned to the thirteenth century. Cipolla suggests that it may have belonged to Cardinal Adelardo dei Catanei, who was Bishop of Verona and died in 1225. He was buried in the cloister adjoining San Zeno, and his tomb is known to have been opened several times.

Cimabue and Duccio at Sta. Maria Novella.—The Ruccellai Madonna, ascribed by Vasari to Cimabue, is now attributed to Duccio, not only on stylistic grounds, but because just such a painting was ordered by the rectors of Sta. Maria Novella from Duccio. A second statement by Vasari, that Cimabue used to stand all day long watching Greek painters at work in a chapel in Sta. Maria Novella, was declared impossible by Milanese, since the church was begun only in 1279. However, it appears from a document published by Fineschi, *Memorie Istoriche*, I, pp. 141–142, that a part of the church, including the chapel of the Gondi, was begun in 1246, and that Vasari's story of Cimabue's boyhood may well be true. (J. WOOD BROWN, *Rep. f. K.* 1901, pp. 127–131.)

FRANCE

The Cult of the Virgin in the Diocese of Lyons.—In the *Bull. Hist. Dioc. Lyon*, 1900, pp. 92–98, 149–153; 1901, pp. 210–215, the Abbé J. PRA-JOUX enumerates the churches and altars dedicated to the Virgin Mary throughout the diocese of Lyons.

The Arum in Gothic Flora.—‘The Arum in Gothic Flora’ is the title of an article by ÉMILE LAMBIN in *R. Art Chret.* 1901, pp. 488–497. The arum, or calla lily, appears first in the eleventh century in the church at Vézelay; apparently disappears from church decoration in the early twelfth century, but reappears in naturalistic form in the late twelfth and early

thirteenth centuries; aside from its form, the arum was cultivated by Gothic sculptors because of its symbolic character as an emblem of the springtime and the Resurrection.

St. Laurent de Langeais (Indre-et-Loire).—The church of S. Laurent de Langeais has recently been studied carefully by OCTAVE BOBEAU, who has made excavations in the church. The nave is assigned by Lefèvre-Pontalis to the beginning and the transept and choir to the end of the eleventh century. The excavations showed that the original choir was rectangular. They also brought to light fragments of an ancient baptismal font, as well as stone sarcophagi of the eleventh century, which contained vases of incense buried with the dead. (*B. Arch. C. T.* 1901, Avril-Mai, pp. viii-x.)

A Sculptured Madonna of the Twelfth Century.—At the meeting of the Soc. Nat. Ant. Fr., held January 3, 1900, VICOUNT DE ROCHEMONTEIX called the attention of the society to a twelfth century 'Madonna and Child' carved in oak and preserved in the church of Bredon (Cantal). This archaic but interesting Madonna is assigned to the School of Auvergne. It is published in the *B. M. Soc. Ant. Fr.* 1900, pp. 75-77.

Eucharistic Implements in the Museum at Brive (Corrèze).—À propos of a pair of iron pincers made for lifting sacred wafers, and of two moulds in which the wafers were marked with sacred emblems, now in the museum at Brive, ERNEST RUPIN in *R. Art Chrét.* 1901, pp. 281-288, gives an interesting summary of the emblems and figured representations marked on the sacred wafers from the twelfth to the eighteenth century.

A Missal of the Thirteenth Century.—In the collection of Canon Ginon at Grenoble is a thirteenth century missal, which contains a number of variations from the Roman standard. It is analyzed in detail by Professor PAUL FOURNIER in the *Bull. Hist. Dioc. Lyon*, 1901, pp. 253-271. He concludes that it came from the church of St. Saturnin d'Arnas of the diocese of Lyons and that it offers interesting material for the liturgical study of this district in the thirteenth century.

SPAIN

Notes on Spanish Christian Architecture.—A series of articles on Spanish churches by the Architect VINCENTE LAMPÉREZ Y ROMEA, is published in the *Boletín de la Sociedad Española de Excursiones* for 1901. On pp. 1-5 he treats of San Vicente en Ávila; pp. 31-35 of San Miguel de Almazán; pp. 63-66 of the Cathedral of Grenada; pp. 84-88 of Santo Tomás de Soria; pp. 103-110 of the monastery of Santa Maria de Huesta; pp. 126-129 of the triforium of the Cathedral of Cuenca, and pp. 182-191 of the Chapter house of the Cathedral of Plasencia, and of the churches of San Juan de las Abadesas and San Nicolás de Gerona.

Spanish Romanesque Sculpture.—In the *Boletín de la Sociedad Española de Excursiones*, 1901, pp. 13-23, E. S. FATIGATI writes on the 'Romanesque Sculptures of Navarre.' He notes the pre-Romanesque sculptures at San Salvador de Leyre, the archaic Romanesque sculptures of the churches at Sangüesa, Gazolaz, and Hirache, as well as the fine examples of French Romanesque work in various Spanish churches of the twelfth and thirteenth centuries. In the same journal, pp. 35-45, 59-63, he treats of Romanesque sculpture in other provinces.

Spanish Gothic Altar-pieces. — In the *Boletín de la Sociedad Española de Excursiones* 1901, pp. 204-218, E. S. FATIGATI contributes a study of late Gothic altar-pieces in churches at Covarrubias, Burgos, Tarragona, and Saragossa.

Cloisters and Choir Stalls of Pamplona. — In his monograph, *Los Claustros de Pamplona, Sillerías de Coro Españolas* (Madrid, 1901), which is illustrated with seven excellent phototype plates, ENRIQUE SENANO FATIGATI describes the French Gothic cloisters of the Cathedral of Pamplona and the choir stalls of the same cathedral. The cloisters are rich in sculptures of the fourteenth and fifteenth centuries. The notice of the choir stalls, carved in the sixteenth century by Juan Ancheta, contains a catalogue of the most noteworthy Gothic and Renaissance choir stalls in Spain.

Two Visigothic Manuscripts from the Library of Ferdinand I. — In the *Bibl. Éc. Chartes*, 1901, pp. 374-387, MARIUS FÉROTIN publishes an account of two manuscripts from the library of Ferdinand I. One is a collection of psalms and chants copied in 1055, and now preserved at Compostelle; the second dates from 1059, contains chants and litanies, and is now in the private library of the king of Spain.

GERMANY

A Relief of St. Peter in the Berlin Museum. — In the Berlin Museum is a portion of a relief which once represented 'The Punishment of Ananias.' Only two figures remain, St. Peter and one of the servants. It came from Ajatzam in Asia Minor, and is assigned by G. STRZYGOWSKI, in the *Jb. Preuss. Kunts.* 1901, pp. 29-34, to the fifth century. From near this locality came the fragment of 'Matthew's Gospel,' with important miniatures, lately acquired by the Bibliothèque Nationale. Strzygowski emphasizes the importance of Asia Minor as a field for the study of early Byzantine art.

Abraham and his Companions. — A fragment of an early Christian bishop's chair in the museum at Trier is discussed by HANS GRAEVEN in *Jb. V. Alt. Rh.* 1900, pp. 147-163 (2 pls.). By comparison with a mosaic in Sta. Maria Maggiore, he shows that the fragment — an ivory slab with a relief — represents Abraham and his companions (Gen. xiv).

Ivory Relief of Thalia in Berlin. — HANS GRAEVEN points out that a part of a so-called diptych of ivory with a figure of 'Judith,' described by Alex. Wilhelm in 1560 as in the convent library of St. Maximin at Trier, but later lost from knowledge, is undoubtedly now in the Antiquarium at Berlin, and is not a diptych at all, but such a plate as might have been used to ornament a book-closet door, and the figure not Judith, but Thalia. (*Jb. V. Alt. Rh.* 107 (1901), pp. 50-55; 1 pl.)

The Sculptures of the Cathedral at Bamberg. — In the *Rep. f. K.* 1901, pp. 195-229, 255-289, W. VÖGE continues his detailed study of the sculptures of the cathedral of Bamberg. He notes many correspondences between the sculptures at Bamberg and those of the cathedral at Rheims, and at the same time finds a continuity between the older and younger school of sculptors at Bamberg.

The Imperial Graves in the Cathedral at Speyer. — In August, 1900, the imperial graves in the cathedral at Speyer were opened and examined.

The graves are those of Conrad II, his wife Gisela, Henry III, Henry IV, his wife Bertha, Henry V, the four kings Philip of Swabia, Rudolf of Hapsburg, Albrecht of Austria, and Adolf of Nassau. The arrangement of the graves, their contents, and details of the history of the emperors, kings, and empresses, and of the cathedral, are discussed by H. GRAUERT, in *Sitzb. Min. Akad.* 1901, iv, pp. 539-591, with an excursus on the account of the Ursperg chronicler and on other records of the imperial graves.

GREAT BRITAIN AND IRELAND

The Earliest Ribbed Cross Vaults in England.—In the *R. Art Chré.* 1901, pp. 365-393, 463-480, JOHN BILSON, from a study of late Norman and transitional churches in England, maintains that Norman architecture, in its rapid and splendid development in England, anticipated, not only in crypts and side aisles, but also in the high vaults of the nave, the ribbed cross vaults, the evolution of which is generally believed to have taken place in the Isle de France. An examination by competent authorities of the vaults of the nave of Durham Cathedral would doubtless go far in determining the part played by England in the early history of Gothic architecture.

Fonts with Representations of the Seven Sacraments.—At the meeting of the Archaeological Institute (British), December 4, 1901, A. C. FRYER read a paper on carved fonts with representations of the seven sacraments. Twenty-nine of these are known in England. These were described in the paper. The eighth panel represents the last judgment, the baptism of Jesus, or (most frequently) the crucifixion. The fonts belong to the fifteenth century (*Athen.* December 21, 1901).

Six Derbyshire Fonts.—In *Reliq.* VII, 1901, pp. 267-270 (6 figs.), G. LE BLANC SMITH publishes and describes a Norman font at Youlgreave, a Transitional Norman font at Winster, an Early English font at Ashbourne, a font of the Decorated period at Bakewell, a font of the Perpendicular period at Tideswell, and a lead font of the Norman period at Ashover. The last is adorned with figures of saints standing under arches. The fonts at Winster and Bakewell are also adorned with figures.

Three Kentish Churches.—In *Reliq.* VII, 1901, pp. 243-261 (22 figs.), J. RUSSELL LARKBY describes the churches of St. Michael, at Offham, St. Mary Magdalen, at Stockbury, and Sts. Peter and Paul, at Trottescliffe. St. Michael's was originally a Norman structure, but contains parts dating from the thirteenth, fourteenth, and fifteenth centuries. Its most interesting feature is the east window, with fine decorated tracery. The church at Stockbury has an uninteresting exterior, having been much restored, but contains within some fine examples of Early English stone carving. Some of the capitals are especially interesting. The church at Trottescliffe was originally an Early Norman building, but was greatly lengthened in Middle Norman times, and has received some modern additions. The earliest existing windows in the church are of the Middle Norman period. In one window are remains of fine late Perpendicular canopy glass and a fine and complete "Trinita."

Ardfert.—In *Reliq.* VII, 1901, pp. 220-228 (7 figs.), H. ELINGTON describes the buildings at Ardfert, near Tralee, County Kerry, Ireland. The Romanesque church, Temple-na-hoe, is ascribed to the twelfth century. The cathedral and the Franciscan Abbey belong to the thirteenth century.

All these buildings are now roofless. The cathedral is an interesting specimen of early Irish Gothic, and it, as well as the Franciscan abbey, shows some slight deviations from the usual Early English style.

AFRICA

Byzantine Baptisteries of Tunisia.—On September 20, 1901, P. GAUCKLER presented to the Académie des Inscriptions plans and photographs of various baptisteries recently discovered in Tunisia. These are found at Carthage, Ould Ramel, Hamman-Lif, Upenna, Henchir-Hakaima, Sfax. In all, eleven Byzantine baptisteries are known in Tunisia. Of these only four reproduce the classic Byzantine type. The others show that in Africa an effort was made to produce new and original types. (*C. R. Acad. Insc.* 1901, pp. 603 f.; *Chron. d. Arts*, 1901, pp. 251-252.)

The Tomb and the Basilicas of St. Cyprian at Carthage.—In *R. Arch.* XXXIX, 1901, pp. 183-201, PAUL MONCEAUX discusses the various notices of the tomb and the basilicas of St. Cyprian at Carthage, and finds that there were at least three sanctuaries dedicated to Cyprian: two basilicas outside the wall, built early in the sixth century, and a church within the city, near the harbor. This was a modest chapel in the fourth century, but a great basilica at the time of the Byzantine conquest. Of the two other churches, one was at the place of martyrdom, the *Ager Sexti*, in the direction of the Marsa; the other, at the *Mappalia*, over the tomb of the Saint, near the great cisterns of the Malga.

RENAISSANCE ART

ITALY

The Castello at Milan.—In the *Monthly Review*, August, 1891, pp. 117-136 (5 pls.), JULIA CARTWRIGHT (Mrs. ADY) describes the restoration of the Castello at Milan, giving a history of the building and a description of its different parts, with special attention to the sculptures and paintings.

Milanese Marbles at Desio.—Among the marbles in the garden of the Villa Antona-Traversi at Desio are several of Milanese workmanship discussed by DIEGO SANT' AMBROGIO in the *Arch. Stor. Lomb.* 1901, pp. 343-353. One is a funerary relief, assigned to the early fourteenth century and believed to be that of Rebaldo de Aliprandis. Another is a sixteenth century chimney piece which once belonged to the Casati family. Finally, there are at Desio two Sybils, the Cumaean and the Phrygian, in the style of Annibale Fontana.

Donatello as an Architect and Decorator.—It is often assumed that Donatello limited his energies to sculptural work, and that his assistants or associates—especially Michelozzo di Bartolommeo—furnished the designs for the architectural portions of his monumental works. In some cases this seems to have been the case, but that Donatello had creative power in architectural design of a kind essentially different from that of Michelozzo is brought out by W. BODE in the *Jb. Preuss. Kunsts.* 1901, pp. 3-28.

A Madonna Relief in Sta. Maria Mater Domini in Venice.—In 1899 J. Carotti published a pamphlet entitled *Una Madonna inedita della Scuola di Donatello*, in which he ascribed to the school of Donatello a terra-cotta

relief of the Madonna in Sta. Maria Mater Domini in Venice. In the *Rep. f. K.* 1901, pp. 157-159, C. v. F. ascribes it to Giovanni da Pisa.

Andrea Marchesi da Formigine.—The wood carver, Andrea Marchesi, who made the frame for Raphael's St. Cecilia in Bologna, is the subject of an article by UGO BERTI in *L'Arte*, 1901, pp. 21-28 of the section entitled 'Arte Decorativa.' Written documents concerning the life and works of Andrea and of his followers, called the 'Formigine,' are few; but their works in stone and wood are numerous and deserve more careful study than they have yet received.

Giacomo Serpotta.—In *L'Arte*, 1901, pp. 77-92, 162-180, ENRICO MANCERI contributes a fully illustrated and detailed account of the work of Giacomo Serpotta, a sculptor and *stuccatore* of the late eighteenth and early nineteenth century, whose elaborate productions enrich many of the churches of Palermo and other cities of Sicily.

A Medallion of Federigo II di Montefeltro.—In the Museo Oliveriano at Pesaro is a fine medallion of Federigo II, who in 1474 received the Order of the Garter from Edward IV. This is published by A. VENTURI in *L'Arte*, 1901, pp. 202-203, and is considered genuine, whereas the medallion cited by Armand, II, p. 36, is thought to be modern.

Mantegna Studies.—In the *Jb. Preuss. Kunsts.* 1901, pp. 78-87, 154-180, RICHARD FOERSTER contributes an article entitled 'Studien zu Mantegna und den Bildern im Studierzimmer der Isabella Gonzaga.' In the British Museum is a drawing by Mantegna, known as *Virtus Combusta*, the significance of which has not been appreciated. Having completed the composition by means of an engraving by Zoan Andrea Vavassore, Foerster interprets it by means of passages from Galen and from Mantegna's letters as portraying the antithesis of Virtue and Ignorance. In like manner Mantegna's paintings of the Parnassus and the Expulsion of Evil Passions, made for Isabella Gonzaga, have been misunderstood, and are here more carefully interpreted.

Portrait of Lorenzo di Credi, and Date of his Birth.—Among the recent acquisitions of the Uffizi is a portrait by Lorenzo di Credi, supposed to represent himself. This, however, is disproved by the publication in *L'Arte*, 1901, pp. 135-137, by CHARLES LOESER, of the portrait of Lorenzo by himself in the collection of W. Beattie, Glasgow. The painting is signed on the back: *Lorenzo di Credi Pittore ecc. te 1488, aetatis sue 32, VIII.* Vasari declares that Lorenzo died in 1530, aged seventy-eight, which would put his birth in the year 1452. But Milanese found from his archives that he died, January 12, 1536, and if seventy-eight years of age, his birth would have occurred in 1459. The inscription on this painting, however, shows that he was born in the year 1456. When he died in 1536, he must have been eighty years of age.

A Companion of Pesellino.—In the *Gaz. B.-A.* 1901, pp. 18-34, 333-343, MARY LOGAN contributes an interesting study entitled 'Compagno di Pesellino.' The article centres upon the painting of the Trinity in the National Gallery, attributed by Morelli to Pier di Lorenzo. Although Pesellino was at one time associated with Pier di Lorenzo and Zanobi di Migliore, and for another period with Pier di Lorenzo, documentary evidence seems to prove that Pier di Lorenzo was not the author of the Trinity of the National Gallery. The unknown follower of Pesellino is here designated simply as the *Compagno di Pesellino*. Various other paintings are then

ascribed to this painter, amongst which are the History of Aeneas, a Tourney, and the Visit of the Queen of Sheba to Solomon, — all in the Jarvis collection at New Haven.

The Triumph of Death at the Hospice at Palermo. — On the walls of the Palazzo Selafani, which was transformed into a hospice, then into barracks, is a striking fresco representing the Triumph of Death. Long attributed to Antonio Crescenzo of Palermo, this fresco has been declared to be a Flemish painting by Janitschek, Burckhardt, and Bode. In the *Gaz. B.-A.* 1901, pp. 223–228, EUGÈNE MÜNTZ vindicates its Italian character by pointing out its analogies with the works of Pisanello, Piero della Francesca, and other Italian painters. He suggests the possibility of its being painted by Leonardo da Besozzo, who worked at Naples as late as 1458.

Botticelli as a Pupil of Fra Filippo Lippi. — In *R. Arch.* XXXIX, 1901, pp. 12–19 (2 pls.; 1 fig.), HERBERT P. HORNE states on the authority of documents that Botticelli was thirteen years old in February, 1457–58, and was therefore born three years earlier than is ordinarily stated. He was not a pupil of Pesellino, who was dead before Botticelli left school. In 1459 he became a pupil of Filippo Lippi. A Virgin and Child at Settignano, in a chapel called Oratorio di SS. Maria al Vannella, is a work of Botticelli while he was under the influence of Filippo Lippi, and had not yet come under that of Antonio Pollaiuoli. The painting is much restored, but its character is still evident. The frescoes of the Spedaletto are briefly discussed, and a plan of the building is given.

Bonifazio di Pitati da Verona. — The earlier writers knew of only one Venetian painter named Bonifazio, some classing him as from Verona, others as from Venice. More recent writers, including Morelli, endeavor to distinguish as many as three painters of this name. A thorough study of the archives of Verona and of Venice with reference to Bonifazio has been made by GUSTAV LUDWIG, and the results are being published in the *Jb. Preuss. Kunsts.* 1901, pp. 61–78, 180–200. He finds records of only two painters of this name: (1) Bonifazio di Bartolommeo da Pasinis; born, 1489; married Alferana Palmeri; died, April 3, 1540; and (2) Bonifazio di Pitati da Verona; born, 1487; married Marietta Brunelli; died, October 19, 1553. Notes from the archives are also published concerning the pupils of the second Bonifazio, Domenico Biondo, Battista di Bonifazio, Marcantonio di Bonifazio, Antonio Palma, Stefano Cernotto, Vitruvio Buonconsiglio detto Vitruvio, Polidoro da Lanzano, and Jacobo detto Pisbolica.

A Decorated Tray in the Franchetti Collection, Venice. — In the collection of Baron Giorgio Franchetti, in Venice, is a circular tray on which is very charmingly painted the Choice of Hercules. It is published in *L'Arte*, 1901, p. 133, and ascribed to the school of Liberale of Verona.

Some Early Works of Lorenzo Lotto. — In *L'Arte*, 1901, pp. 152–161, G. BISCARO discusses the frescoes adjoining the monument of Agostino Origo in the church of San Nicolò at Treviso. These frescoes were assigned by Ridolfi to Antonello da Messina; by Federici, Cavalcaselle, Burckhardt, and Bode to Giovanni Bellini; by Morelli, Frizzoni, Lützwow, and Berenson to Jacopo dei Barbari. Biscaro here gives his reasons for assigning them to Lorenzo Lotto, to whom he also assigns two portraits, in Naples and Vienna, attributed by others to Jacopo dei Barbari.

The So-called Portrait of Cardinal Passerini in the National Gallery at Naples.—In the National Gallery at Naples is a portrait attributed to Raphael and supposed to represent Cardinal Silvio Passerini da Cortona. A. FILANGIERI DI CANDIDA has, however, discovered on the back of the canvas a cartellino showing that the painting was formerly No. 134 of the Farnese Gallery and that the Farnese inventories describe it as a portrait by Raphael of Paul III when he was Cardinal Alessandro Farnese. The same face appears in the Vatican fresco by Raphael representing the Decretals of Gregory IX and was recognized by Vasari as that of Alessandro Farnese. Hence Filangieri's contention in *L'Arte*, 1901, pp. 129–134, that the portrait represents Cardinal Alessandro Farnese may be accepted as proved.

The Master of the Carrand Triptych.—In the *Jb. Preuss. Kunsts.* 1901, pp. 35–55, W. WEISBACH attempts to identify the "Master of the Carrand Triptych," who is represented by a Triptych from the Carrand Collection, now in the Museo Nazionale, Florence. From various considerations, documentary and stylistic, he is led to suppose that this master is Giuliano Pesello. Other works by the same master are enumerated by Weisbach in the *Rep. f. K.* 1899, p. 76.

Riccardo Quartararo.—Documents show that a painter Riccardo Quartararo had various commissions in Palermo from 1485 to 1501, but thus far only a single painting, representing SS. Peter and Paul, has been identified as by him. E. MANCERI, in *L'Arte*, 1901, p. 144, finds three paintings in the National Museum at Palermo which he ascribes to this master. These paintings are a Coronation of the Virgin, a Santa Rosalia, and an Annunciation.

A Fresco by Ascanio Condivi.—At Ripatransone there is in the Chiese del Carmine a fresco attributed to Vincenzo Pagani. Recently discovered documents to be published in the *Rassegna bibliografica dell'arte italiana* show that this fresco, representing the Crucifixion, was executed by Ascanio Condivi, the pupil and biographer of Michelangelo.

Domenico Capriolo.—The documentary studies of G. BISCARO, published in the *Atti dell'Ateneo di Treviso* enable him to assign to Domenico Capriolo, pupil of Lotto, the Assumption of the Madonna in the Cathedral at Treviso. To the same artist may be assigned a Holy Family in the Mantovani Collection at Treviso, a Nativity in the Communal Gallery at Treviso, and a Nativity in the Collection of Prince Giovanelli (*Rep. f. K.* 1901, pp. 156–157).

Two Paintings attributed to Paris Bordone.—In October, 1900, there was held in the Museum at Treviso a special exhibition of the works of Paris Bordone, followed by the publication by LUIGI BAILO and GIROLAMO BISCARO, *Della vita e delle opere di Paris Bordon*, Treviso, 1901. One of these paintings is a half figure of Christ, from the Rasi Collection at Ravenna, attributed by Cavalcaselle, Frizzoni, Barto, and Biscaro to Paris Bordone. In *L'Arte*, 1901, pp. 280–288, A. MOSCHETTI gives his reasons for assigning this painting to some follower of Paris Bordone. On the other hand a somewhat similar Christ, grouped with the Virgin or, as he suggests, St. Martha, in the Museo Civico at Padua, appears on his analysis to be a genuine Paris Bordone.

FRANCE

The House of François I at Abbeville. — At Abbeville there are several houses with wooden façades sculptured in the sixteenth century. One with an elaborately carved doorway is known in local handbooks and guides as the house of François I. In *R. Art Chrét.* 1901, pp. 414-417, ALCIUS LEDIEU shows that this house was erected in the time of Louis XII, that François I resided not here but in the hôtel de la Gonthuse when he visited Abbeville. Possibly he contributed something for its completion on his first visit to Abbeville in 1517.

French Renaissance Painting. — Italian, Flemish, and German paintings of the Renaissance period are widely known. French paintings of the same period are less well known. CAMILLE BENOIT, in the *Gaz. B.-A.* 1901, pp. 89-101, 318-332, 368-380, writes on French painting at the end of the fifteenth century. After mentioning various dated paintings at the end of the fifteenth century, he discusses in detail the works of the master of the portraits of 1488, a strong, realistic portrait painter of Burgundy, and the gentler, more religious works of a painter whom he designates as the Master of Moulins, or the Master of the Angels.

Gutenberg and Printing in France in the Fifteenth Century. — The 500th anniversary of the birth of Gutenberg has led to a revival of interest in early French printing. The volume of LÉOPOLD DE LISLE, *À la Mémoire de Jean Gutenberg*, Paris, 1900, was not only well illustrated with heliogravures, but brought to light rare documents preserved in the Bibliothèque Nationale. The volume of ANATOLE FRANCE, *Jean Gutenberg, suivi du Traité des Phantasmes de Nicole Langelier*, Paris, 1900, though containing historical information, was chiefly interesting for its typographical illustrations. More important still is the learned volume of A. CLAUDIN, *Histoire de l'Imprimerie en France au XV^e et au XVI^e siècle*. Tome I, Paris, 1900, an analysis of which is given by CLEMENT JANIN in *Gaz. B.-A.* 1901, pp. 239-250.

A French Miniature of a Scene in Florida. — In *C. R. Acad. Ins.* 1901, pp. 8-17, E. T. HAMY writes, 'Sur une miniature de Jacques Le Moyne de Morgues, représentant une scène du voyage de Laudonnière en Floride (1564).' The miniature is on vellum, and belongs now to Mme. la Comtesse de Janay, formerly to the collection of her father, M. le Comte de Béhague. It represents a group of French soldiers, in whose presence stands a group of American Indians. Near the Indians is a hexagonal pier marked with French devices. The French costumes are those of the time of Charles IX. Hence the military expedition must be that of Jean Ribault or of René de Laudonnière or of Dominique de Gourgues. The *Histoire notable de la Floride située ès Indes Occidentales*, published by Basanier in 1586, describes the erection of such a column at the mouth of the May River by Laudonnière in 1564, and the *Brevis Narratio eorum quae in Florida Americae Provincia Gallis acciderunt*, published by Théodore de Bry in 1591, is illustrated by copper plates taken from sketches made on the spot by Jacques Le Moyne de Morgues. One of these copper plates reproduces exactly the scene on the miniature in the possession of Mme. de Janay. In the estimation of M. Hamy, this miniature is declared to be "one of the most precious records" of the attempted American colonies of France.

A Fifteenth Century French Crucifix.—In the *B. M. Soc. Ant. Fr.* 1900, pp. 186-189, AD. DE ROCHEMONTEIX publishes a wooden crucifix in the church of Montsalvy (Cantal). The Christ is life size, and is clad with a loin cloth of Byzantine type. The feet are not crossed and are not supported by a foot-rest. In the same district a finer crucifix may be seen in the church of St. Flour (Cantal). Both may be referred to the fifteenth century.

Claude Perrault.—In the *Gaz. B.-A.* 1901, pp. 209-222, 425-440, PAUL BONNEFON writes of Claude Perrault as an architect and traveller. The articles are concerned chiefly with an account of Perrault's travels from 1662-1669 in western France.

The Engraver called Gaspero Reverdino.—Bartsch, Passavant, and their followers classify as a mediocre Paduan, and give an Italian name to the engraver who signed his plates *Ge Reverdinus*. The critical articles of HENRI BOUCHOT, in the *Gaz. B.-A.* 1901, pp. 102-108, 220-238, prove that this engraver was named Georges Reverdy, who flourished at Lyons in 1555, and that far from being a mediocre Paduan, he was essentially "français de France."

A Factory of Italian Faience at Amboise.—In the *B. M. Soc. Ant. Fr.* 1900, pp. 120-125, M. VITRY publishes some fragments of glazed terracotta pilasters found at Amboise. After establishing the Italian character of these fragments, he suggests that they may perhaps be ascribed to Jérôme Solobrin, a potter at Amboise about 1494 to 1502, who was possibly an ancestor of Leocadius Solobrinus da Forli. [We venture to suggest also the possibility of their being the workmanship of Girolamo della Robbia, who made the architectural terra-cotta for the Château de Madrid.]

NETHERLANDS

Jan Van Eyck's Portrait of a Burgundian Chamberlain.—In the *Jb. Preuss. Kunts.* 1901, pp. 115-131, W. BODE writes concerning a portrait of a Burgundian chamberlain recently acquired by the Berlin Gallery. Although not prepared to recognize, with James Weale, in the painting the portrait of Jean de Roubaix et Herzelles, he argues at some length in favor of its attribution to Jan Van Eyck.

Roger van der Weyden.—In the history of Flemish art, Tournai was as influential in sculpture in the fourteenth century as Bruges was in painting in the fifteenth century. From this school emanated Roger van der Weyden, who in the archives figures at first as a sculptor. L. MAETERLINCK has attempted to establish his position as a sculptor, in a volume entitled *Roger van der Weyden et les ymaigiers de Tournai* (Ghent, 1900). In the *Gaz. B.-A.* 1901, pp. 265-284, 399-411, the same author writes on Roger van der Weyden, sculptor, citing a number of monuments which he attributes to the master, and others to sculptors under his influence.

Jacques Daret.—In *Chron. d. Arts*, September 21, 1901, L. MAETERLINCK discusses the identity of the Master of Flémalle with Jacques Daret, a fellow pupil of Roger van der Weyden in the studio of Robert Campin. He brings forward the evidence concerning the life of Jacques Daret, and makes the identity, which was recently asserted by G. Hulin, appear probable. Jacques Daret was an artist of some note, who had commissions at Bruges, Lille, and Arras, where he lived from 1446 to 1458.

A Pupil of the "Master of Flémalle."—In the Berlin Museum is a 'Crucifixion' attributed by Passavant and subsequent writers to "Jarenius." This is a Westphalian painting, and in many details shows the influence of the so-called Master of Flémalle. (F. KOCH, *Rep. f. K.* 1901, pp. 290-291.)

'Coronation of the Virgin,' by Albert Cornelis.—In the *R. Art Chrét.* 1901, pp. 361-364, W. H. JAMES WEALE publishes a unique painting, by Albert Cornelis, representing the Coronation of the Virgin in the midst of Seraphim, Cherubim, Thrones, Dominations, Virtues, Powers, Principalities, Angels, and Archangels. The painting dates from 1517-22, and was made for the Guild of St. Francis for the Church of St. James at Bruges. Various facts in the history of this artist have been recovered, but no other of his paintings is known.

GERMANY

The Birthplace of Hans Brüggemann.—It is generally assumed that Hans Brüggemann, the author of the magnificent altar in the cathedral at Schleswig, was born in the town Husum, in which he lived for a long time and where he died in 1540. In the *Rep. f. K.* 1901, pp. 124-126, R. DOEBNER publishes a document from the official archives in Hanover which shows that Brüggemann was born at Walsrode.

'The Seven Sorrows of Mary,' by Albrecht Dürer.—In the Dresden Gallery are seven paintings (Nos. 1875-1881), known as the 'Seven Sorrows of Mary,' representing the Circumcision, the Flight into Egypt, the Youthful Christ teaching in the Temple, the Bearing of the Cross, the Crucifixion, Christ on the Cross, and the Deposition. These have been recently attributed to Hans Schäufflein, by Scheibler, Woermann, and Thieme, and to Grünewald, by Rieffel. HENRY THODE, who in his *Nürnberger Malerschule* had ascribed these paintings to a pupil of Dürer's, in the *Jb. Preuss. Kunsts.* 1901, pp. 90-114, attributes them to the master himself and assigns them to the year 1498.

The Earliest Dated Pictures by Hans Holbein.—Four paintings in the cathedral at Augsburg are generally accepted as the earliest dated pictures of Hans Holbein the elder. In the *Archiv für Christliche Kunst*, 1898, pp. 51 ff., MAX BACH argued against this attribution, and ascribed them to Bartholomäus Zeitblom. In the *Rep. f. K.* 1901, pp. 137-144, ALFRED SCHRÖDER sustains the earlier attribution.

A Portrait by Titian in the Dresden Gallery.—In the Dresden Gallery there is a portrait by Titian (No. 172) long called 'Pietro Aretino.' Since that designation was proved to be false, the portrait has been called that of a painter, because of a color box(?) represented on it. In the *Rep. f. K.* 1901, pp. 292-293, K. TSCHENSCHNES affirms that this object is no color box, but an apothecary's box, and that the portrait represents a physician. He finds that behind the head was once a nimbus, and infers that the physician was represented as a saint.

Tapestries in the Cathedral at Strassburg.—In the cathedral at Strassburg is a series of tapestries, in fourteen panels, representing the Life of the Virgin. An inscription, repeated on each panel, reads: SYMPTIBV: REV^{MI} · ET · ILL^{MI} · CAPITVLI · ARGENTINENSIS · PRO · VSV · CATHEDRALIS · ECCLESIAE · ANNO 1739. The tapestries do not appear to be well known, even to the residents of Strassburg. Recently they were in need of repair, and application was made to the

Gobelin manufactory. Thus two photographs came to the attention of M. GUIFFREY, who recognizes in them tapestries made in Paris, under Louis XIII, by Pierre Damour, for Cardinal Richelieu. The designs recall the style of Vouet and his school. (*Chron. d. Arts*, 1901, pp. 242-244.)

The Coat of Arms of the Engraver E. S. — Much obscurity envelopes the personality of the engraver E. S. From a coat of arms which appears several times in connection with his signature E or E S, it is inferred by MAX GEISBERG in the *Jb. Preuss. Kunsts.* 1901, pp. 56-60, that he belonged to the Ribeisen family, a name which occurs in Strassburg from the thirteenth to the end of the sixteenth century. Geisberg suggests that possibly the S signified that the engraver came from Strassburg, although living elsewhere.

A Venetian Blockbook in the Berlin Museum. — In the department of engravings of the Berlin Museum is a series of eighteen wood engravings representing the Passion of Christ. Their Venetian character and importance for the history of engraving are brought out by PAUL KRISTELLER in the *Jb. Preuss. Kunsts.* 1901, pp. 132-154.

SPAIN

The Illuminators of the Apocalypse in the Escorial. — In the Escorial near Madrid is a notable folio in manuscript of the Apocalypse, composed of forty-nine pages finely illuminated. From documentary and other evidence, ALESSANDRO VESME-FRANCESCO CARTA, in *L'Arte*, 1901, pp. 35-42, identifies the painters of the miniatures as Jean Bapteur of Freiburg, Peronete Lamy, and Jean Colombe.

BIBLIOGRAPHY

OF

ARCHAEOLOGICAL BOOKS

1901

HAROLD N. FOWLER, *Editor*

*** *Books, pamphlets, and other matter for the Bibliography should be addressed to Professor FOWLER, 49, Cornell Street, Cleveland, Ohio.*



GENERAL AND MISCELLANEOUS

Annuaire des Musées scientifiques et archéologiques des départements. Paris, 1900, Leroux. 440 pp. 8vo. — **W. Muss-Arnolt**, *Theological and Semitic Literature for the Year 1900.* Chicago, 1901, University of Chicago Press. 108 pp. 8vo. \$0.50. — **Atlas archéologique de la Tunisie.** Livr. VII. Paris, 1901, Leroux. 4 cartes et texte en regard. Folio.

E. Babelon, *Mélanges numismatiques.* 3^e série. Paris, 1901, Rollin & Feuardent. 9 pls. — **C. Barrière-Flavy**, *Les arts industriels des peuples barbares de la Gaule du V^{me} au VIII^{me} siècle.* Tome 1. Étude archéologique, historique, et géographique. xii, 498 pp.; 122 figs. Tome 2. Répertoire général des stations barbares de la Gaule. viii, 321 pp. Album. 19 pp.; 91 pls.; 1 map. Toulouse and Paris, 1901. 4to. — **M. Bauer**, see *Bericht* der k. k. Central-Commission. — **J. de Beauregard**, *Parthénon, Pyramides, Saint-Sépulcre (Grèce, Égypte, Palestine).* Lyon, 1901. vii, 337 pp.; 117 figs. 8vo. — **G. Bellucci**, *Amuleti italiani antichi e contemporanei.* Perugia, 1900. 8vo. — **Ph. Berger**, see *Description* de l'Afrique du Nord.

— *Bericht* der k. k. Central-Commission für Erforschung und Erhaltung der Kunst- und historischen Denkmale über ihre Thätigkeit i. J. 1900. Zusammengestellt im Auftrage des Präsidenten v. M. Bauer. Vienna, 1901, W. Braumüller. lvi, 160 pp. 8vo. — **M. Besnier**, see *Description* de l'Afrique du Nord. — **A. Blanchet**, *Études de numismatique.* Paris, 1901, E. Leroux. Tome second: 318 pp.; 4 pls. 8vo. — **P. Blanchet**, see *Description* de l'Afrique du Nord. — **Count A. Bobrinskoi**, *Kurgans and Chance Archaeological Discoveries near the Hamlet Ssmela.* Vol. III. *Journals of the Excavations, 1889-1897, on the Kurgans of the Divisions of Svenigorod, Kanev, and Romno.* St. Petersburg, 1901. xii, 174 pp.; 21 pls.; 2 maps; 78 autotypes. [Russian.] — **E. Bonnell**, *Beiträge zur Altertumskunde Russlands (von den ältesten Zeiten bis um das Jahr 400 n. Chr.), hauptsächlich aus den Berichten der griechischen und lateinischen Schriftsteller.* 2. Bd. St. Petersburg, 1897. iii, pp. 505-1104. 8vo. — **N. de Boulitchov**, *Fouilles de la Russie centrale. Kourgans et gorodietz. Recherches arché-*

- ologiques sur la ligne de partage des eaux de la Volga et du Dniépre. Moscow, 1900. xii, 78 pp.; 34 pls.; 3 maps. Folio.
- P. P. Caproni** and brother, Catalogue of Casts for Sale. Boston, 1901. 300 pp. 8vo. [The illustrations represent some fifteen thousand casts for sale by the firm.]—**G. Caruselli**, Sulle origini dei popoli italici, del nome Pelasgi e di una pretesa età della pietra nel mondo khamitico-europeo. Palermo, 1901. 32 pp. 8vo.—**Catalogue** des moulages de sculptures appartenant aux divers centres et aux diverses époques d'art exposés dans les galeries du Trocadéro. Paris, 1900, Imprimerie Nationale. 239 pp. 8vo.—**Chanenko**, Collection B. Chanenko. Antiquités de la région du Dniépre. Livr. I: Ages de la pierre et du bronze. 15 pp.; 12 pls. II, III: Époque antérieure à la grande migration des peuples. Partie 1: 44 pp.; 37 pls. 2: 31 pp.; 26 pls. Kiew, 1899–1900. Folio. [Russian.]—**C. Chomel**, Histoire du cheval dans l'antiquité et son rôle dans la civilisation. Inde, Perse, Chine, Assyrie et Chaldée, Judée, Égypte, Grèce, Rome. Paris, 1900, A. Legoupy. 173 pp.; 1 pl.; 11 figs.—**W. Christ**, Führer durch d. k. Antiquarium in München. Unter Mitwirkung v. H. Thiersch, K. Dyroff u. L. Curtius. Munich, 1901. 121 pp.; 7 pls. 8vo.—**L. Conforti**, Das Nationalmuseum in Neapel, ins Deutsche übertragen von P. E. Lorenz. Naples, 1901. 50 pp.; 162 pls. Folio.
- C. Davenport**, Cameos. London, 1900, Seely & Co. 66 pp.; 28 pls.; 1 fig. 4to.—**H. Delbrück**, Geschichte der Kriegskunst im Rahmen der politischen Geschichte. 2. Teil, 1. Hälfte: Römer u. Germanen. Berlin, 1901, G. Stilke. 231 pp. 8vo.—**A. Del Mar**, Ancient Britain in the Light of Modern Archaeological Discoveries. New York, 1901. 24, 206 pp. 8vo.—**E. Demoulins**, Les grandes routes des peuples. Essai de géographie sociale: Comment la route crée le type social. Tome 1^{er}: Les routes de l'antiquité. Paris, 1901, Didot. 8vo. (With maps.)—**Denkmäler** der Baukunst. Zusammengestellt, gezeichnet und herausgegeben vom Zeichen-Ausschuss der Studierenden der Kgl. Technischen Hochschule zu Berlin. (Abteilung für Architektur.) Liefg. 1. 4. verm. u. verb. Aufl. Antike Baukunst. Blatt I–XII a. Berlin, 1901, W. Ernst und Sohn. Folio.—**Description** de l'Afrique du Nord. Musées et collections archéologiques de l'Algérie et de la Tunisie. Musée Lavigerie de Saint-Louis de Carthage. Collection des Pères-Blancs formée par Le R. P. Delattre. I Série: Antiquités puniques par Ph. Berger. (Préface de A. Héron de Villefosse.) Paris, 1900, E. Leroux. xiv, 279 pp.; 36 pls.; 20 figs. Folio. IX: Collection Farges par M. Besnier et P. Blanchet. Paris, 1900, E. Leroux. iv, 90 pp.; 11 pls. 4to.—**M. Desideri**, La Macedonia dopo la battaglia di Pidna. Rome, 1901. 92 pp. 8vo.—**N. Diepolder**, Der Tempelbau der vorchristlichen u. christlichen Zeit oder die bildenden Künste im Dienste der Religion bei den Heiden, Juden, Mohammedanern u. Christen. Leipzig, 1901, O. Spamer. viii, 296 pp.; 1 pl.; 200 figs. 8vo.
- G. Ebe**, Architektonische Raumlehre. Entwicklung der Typen des Innenbaus. Dresden, 1900, G. Kühnmann. Bd. 1: Von den ältesten Zeiten bis zum Abschluss der gothischen Periode. 237 pp.; 134 figs. 4to.—**F. Eusebio**, Sul museo civico d'Alba e sopra alcune scoperte archeologiche nel territorio albeso. Turin, 1901. 8vo.
- Carlo Fiorilli**, see **Ministero della Pubblica Istruzione**.—**G. Floerke**, Zehn Jahre mit Böcklin. Aufzeichnungen u. Entwürfe. Munich, 1901, F. Bruckmann. 255 pp.; 14 pls. 4to. [Partial contents: Farbige Skulptur, pp. 129–149; Gedanken über Bildhauerei, pp. 150–158.]—**R. Foerster**, Das preussische Königtum und die klassische Kunst. Rede gehalten am 18 Januar. Breslau, 1901, M. and H. Marcus. 37 pp. 8vo.—**G. Forestier**, La roue. Étude paléo-technologique. Paris et Nancy, 1900, Berger-Levrault et Cie. 140 pp.; 161 figs. 8vo.—**E. Frantz**, Handbuch der Kunstgeschichte. Mit Titelbild u. 393 Abb. im Text. Freiburg i. Br., 1900, Herdersche Verlagshandlung. xii, 448 pp.; 394 figs. 8vo.—**J. G. Frazer**, The Golden Bough. A study in magic and religion. 2d ed. 3 vols. London, 1900, Macmillan &

- Co. xxviii, 467; x, 471; x, 490 pp. 8vo. — **A. Furtwängler**, Beschreibung der Glyptothek König Ludwigs I. zu München. Munich, 1900, A. Buchholz. 384 pp. 8vo.
- Ch. Galbrun**, see **Trawinski**. — **P. Gauckler**, Régence de Tunis. Direction des Antiquités et des Beaux-Arts. Compte rendu de la marche du service en 1900. Tunis, 1901. 19 pp. 8vo. — **K. Goertz** (†1883), Collected works. Parts I-V. St. Petersburg, 1900. 8vo. [Russian. Contents: Archaeology of Taman; Letters from Italy and Sicily, 1870-71; Painting in Northern Europe from Charlemagne to the Beginning of the Romanesque Period; Popular Essays on Oriental, Classical, and Early Christian Archaeology.] — **E. Grosse**, Kunstwissenschaftliche Studien. Tübingen, 1900, J. C. B. Mohr. 259 pp. 8vo.
- Histoire de l'Algérie par ses monuments**. Ouvrage de luxe. Edité sous les auspices du Gouvernement Général de l'Algérie. Paris, 1900, L. Baschet. 70 pp.; 100 figs. 4to. — **M. Hoffmann**, August Böckh. Lebensbeschreibung und Auswahl aus seinem wissenschaftlichen Briefwechsel. Leipzig, 1901, B. G. Teubner. viii, 483 pp.; 1 portrait. 8vo. — **F. Hommel**, Die Insel der Seligen in Mythos u. Sage der Vorzeit. Vortrag. Munich, 1900, H. Lukaschik. 42 pp.; 3 figs. 8vo.
- L. Koch**, Bericht über die Abhaltung des 3 Cyklus von kunstgeschichtlichen Vorträgen am Gymnasium zu Bremerhaven. Programme, Bremerhaven, 1900. pp. 15-21. 4to. — **A. Kuhn**, Allgemeine Kunstgeschichte. Die Werke der bildenden Künste vom Standpunkte der Geschichte, Technik u. Aesthetik. Einsiedeln, 1900, Benziger.
- K. Lange**, Das Wesen der Kunst. Grundzüge einer realistischen Kunstlehre. 2 vols. Berlin, 1901, G. Grote.
- E. Maass**, Analecta sacra et profana. Marburg, 1901, N. E. Elwert. 16 pp. 4to. — **E. Maïndron**, Marionnettes et guignols. Les poupées agissantes et parlantes à travers les âges; Marionnettes dans l'antiquité, etc. Paris, 1901, Floury. 7 colored pls.; 148 figs. 4to. — **L. Mannoichi**, Guida pratica dei monumenti e delle opere d' arte nella provincia di Ascoli Piceno. Grottamare, 1900. li, 184 pp. 8vo. — **V. Masi**, Vicende politiche dell' Asia dall' Ellesponto all' Indo. Vol. II: Dall' anno 67 all' anno 333 di C. Città di Castello, 1901. xii, 520 pp. 8vo. — **J. H. Massi**, Description abrégée des musées [pontificaux] de sculpture antique grecque et romaine, avec addition des musées grégoriens étrusque et égyptien, des salles Borgia, des monuments assyriens, etc. Rome, 1901. 104 pp. 8vo. — **R. Menge**, Einführung in die antike Kunst. Ein methodischer Leitfaden für höhere Lehranstalten und zum Selbstunterricht. 3. Aufl. Leipzig, 1901, E. A. Seemann. viii, 338 pp. 8vo. — **Ed. Meyer**, Geschichte des Alterthums. 3. Bd.: Das Perserreich und die Griechen. 1. Hälfte: Bis zu den Friedensschlüssen 448 und 446 v. Chr. Stuttgart, 1901, J. G. Cotta. xiv, 691 pp.; 1 map. 8vo. — **Meyers Reisebücher**, Griechenland und Kleinasien. 5. Aufl. Leipzig and Vienna, 1901, Bibliograph. Institut. 338 pp.; 13 maps; 25 plans; 2 figs. 8vo. — **Ad. Michaelis**, Strassburger Antiken. (Festgabe für die archäologische Section der XLVI Versammlung deutscher Philologen u. Schulmänner dargeboten von dem Kunstarchaeologischen Institut der Kaiser Wilhelms-Universität Strassburg.) Strassburg, 1901, K. J. Trübner. 38 pp.; 45 figs. 4to. — See **A. Springer**. — **Ministero della Pubblica Istruzione** (**Carlo Fiorilli**), L' Amministrazione delle antichità e belle arte in Italia. Gennaio 1900-Giugno 1901. Rome, 1901. 193 pp. 4to. [Reports on monuments, arranged by regions (pp. 1-97), excavations (pp. 98-124), museums and galleries (pp. 125-149), objects of art (pp. 150-171), fine arts (pp. 172-179), musical and dramatic art (pp. 180-186), various items (pp. 187-191).] — **Monografia della Terra di Bari** (pubbl. per cura della Deputazione provinciale). Vol. I. Trani, 1900. Folio. [Contains, among other things: S. Fiorese, Cenni storici della prov. di B. — Carabellese, Della storia dell' arte in Puglia, e più particolarmente nella Terra di B., sino ai primi anni del sec. XIII. — Massi, Saggio di bibliografia di T. di B.]
- C. Niebuhr**, Tell el-Amarna Period. Relations of Egypt and Western Asia in the Fifteenth Century B.C.

- London, 1901, D. Nutt. 64 pp. 8vo. 1s. 6d.
- G. Perrot**, L'histoire de l'art dans l'enseignement secondaire. (Bibliothèque internationale de l'enseignement supérieur.) Paris, 1900, A. Chevalier-Marescq & Cie. 158 pp. 8vo. — **G. de Petra**, Intorno al Museo Nazionale di Napoli. Auto-difesa. Naples, 1901. 38 pp. 8vo. — **Fr. Pichler**, Das Epigraphisch-numismatische Cabinet der Universität Graz. Graz, Styria, 1901. 38 pp. 8vo. — **M. Prou**, see **Rostovtsew**.
- P. Reynaud**, La civilisation païenne et la famille. Paris, 1901, Perrin. 8vo. — **G. Riat**, Paris. Eine Geschichte seiner Kunstdenkmäler vom Altertum bis auf unsere Tage. (Berühmte Kunststätten nr. 6.) Berlin and Leipzig, 1900, E. A. Seemann. 203 pp.; 177 figs. 8vo. — **Otto Ribbeck**, Ein Bild seines Lebens aus seinen Briefen, 1848-1898. Mit 2 Porträts nach Zeichn. v. **Paul Heyse**. Stuttgart, 1901, J. G. Cotta Nachf. viii, 352 pp. 8vo. — **S. Ricci**, Del metodo sperimentale nelle discipline archeologiche. Florence, 1900. — **H. Riggauer**, Über die Entwicklung der Numismatik u. der numismatischen Sammlungen im 19. Jahrhundert. Address. Munich, 1900. 24 pp. 4to. — **M. Rostovtsew** and **M. Prou**, Catalogue des plombs de l'antiquité, du moyen âge et des temps modernes conservés au département des médailles et des antiques de la Bibliothèque Nationale. Précédé d'une étude sur les plombs antiques par **M. Rostovtsew**. Paris, 1900, C. Rollin and Feuardent. 416 pp.; 12 pls. 8vo.
- O. Schrader**, Reallexikon der indogermanischen Altertumskunde. Grundzüge einer Kultur- und Völkergeschichte. 2. Halbband. Strassburg, 1901, K. J. Trübner. xl, pp. 561-1048. 8vo. — **H. Schurtz**, Urgeschichte der Cultur, mit 434 Abb. im Text, 8 Taf. in Farbendruck, 15 Taf. in Holzschnitt u. Tonätzung u. 1 Kartenbeilage. Leipzig and Vienna, 1900, Bibliographisches Institut. xiv, 658 pp. 4to. — **Scriptores** originum Constantinopolitanarum. Recensuit Th. Preger. Fasc. 1: Hesychii Illustris origines Constantinopolitanae. Anonymi enarrationes breves chronographicae. Anonymi enarrationes breves chronographicae. Anonymi narratio de aedificatione templi s. Sophiae. Leipzig, 1901, B. G. Teubner. xx, 133 pp. 8vo. — **A. J. Sievert**, Lopodunum-Ladenburg 98-1898. Eine achtzehnhundertjährige Stadtgeschichte. viii, 109 pp.; 23 figs. 8vo. — **E. Soil**, Rome et Byzance. Notes d'archéologie monumentale latine et byzantine. Tournai, 1901, Casterman. 140 pp.; 26 pls. 8vo. — **A. Springer**, Handbuch der Kunstgeschichte. 6. Aufl. bearbeitet v. A. Michaelis. I: Das Altertum. Leipzig, 1901, E. A. Seemann. 398 pp.; 8 colored pls.; 625 figs. 4to. — **E. Stange**, Saalburg u. Pfahlgraben. Populärwissenschaftl. Erklärung der beiden Namen. Homburg, 1901, F. Schick. 45 pp.; 1 map. 8vo. — **J. Strzygowski**, Orient oder Rom. Beiträge zur Geschichte der spätantiken u. frühchristlichen Kunst. Mit 9 Taf. u. 53 Abb. im Text. u. a. nach Aufnahmen der Palmyra-Expedition Sobornheim. Leipzig, 1901, J. C. Heinrichs'sche Buchh. 159 pp. 4to.
- Testo e commento al disegno di legge dell'on. Gallo sugli oggetti di antichità e belle arti, con osservazioni di valenti artisti e giureconsulti, le quali dimostrano ad evidenza che il progetto Gallo, se sanzionato dai due Parlament, tornerebbe a distruzione delle Belle Arti, e del loro commercio in Italia.** Rome, 1901. 149 pp. 8vo. — **G. G. Tocilescu**, Fouilles et recherches archéologiques en Roumanie. Bucarest, 1900. 243 pp. 4to. — **F. Trawinski** and **Ch. Galbrun**, Guide populaire de Musée du Louvre. Paris, 1901. 128 pp.; 6 pls.; 4 figs. 8vo. — **Treasures of Art in Russia**. Published by the Society for the Advancement of the Arts. St. Petersburg, 1901. 4to. Vol. I. Nos. 1-4. [Plates illustrating works of ancient and modern art in the Ermitage and other collections in Russia, with Russian and brief French text.]
- J. Urquhart**, Die neueren Entdeckungen und die Bibel. 2. Band: Von Abraham bis zum Auszug aus Aegypten. Uebersetzt von E. Spliedt. Stuttgart, 1901, Kiemann. 331 pp. 8vo. 5 mk.
- E. Wellington**, A Descriptive and Historical Catalogue of the Collection of Pictures and Sculptures at Apsley House. London, 1901, Longmans, Green & Co. 2 vols. 4to. — **H.**

- Winckler**, Kritische Schriften. (From *Orientalist. Literaturzeitung.*) Berlin, 1901, W. Peiser. 126 pp. 8vo.
- M. G. Zimmermann**, Kunstgeschichte des Altertums und des Mittelalters bis zum Ende der romanischen Epoche. (Allgemeine Kunstgeschichte hrsg. v.

H. Knackfuss u. M. G. Zimmermann. Bd. 1.) 2. Aufl. Bielefeld and Leipzig, 1900, Velhagen u. Klasing. vi, 535 pp.; 411 figs. — **E. Zironi**, Archeologia preistorica e l' arte delle terrecotte in ogni tempo. Bologna. 95 pp.; 1 pl. 8vo.

EGYPTIAN ARCHAEOLOGY

- F. M. Barber**, The Mechanical Triumphs of the Ancient Egyptians. London, 1900. x, 123 pp.; 14 pls.; 15 figs. 8vo. — **F. W. v. Bissing**, Der Bericht des Diodor über die Pyramiden. Berlin, 1901, A. Duncker. 40 pp. 8vo. — Le bas-relief de Kom el Chougafa. Leipzig, 1901, G. Fock. 13 folio pls. in heliogravure with text: La catacombe nouvellement découverte de Kom el Chougafa. 9 pp. 8vo. — Ein thebanischer Grabfund aus dem Anfang des neuen Reiches. Berlin, 1901, A. Duncker. 2 Lfg.: 3 colored pls. Folio. — **Buonamici**, La civiltà Egiziana. Florence, 1900. — **G. Daressy**, see *Service des Antiquités*. — **N. de G. Davies**, The Mastaba of Ptahhetep and Akhethetep at Saqqarah. Part II. The Mastaba. The Sculptures of Akhethetep. With notes by F. Ll. Griffith. (Archaeological Survey of Egypt. Ninth memoir.) London, 1901. viii, 36 pp.; 35 pls. 4to.
- Egypt Exploration Fund**, Archaeological Report, 1900–1901. Comprising the work of the Egypt Exploration Fund and the progress of Egyptology during the year 1900–1901. Edited by F. Ll. Griffith. London, 1901. 86 pp.; 2 pls.; 5 maps; 2 figs. See **Davies** and **Petrie**.
- E. Grébault**, Le Musée Égyptien. Recueil de monuments et de notices sur

les fouilles d'Égypte. Tome I. Paris, 1901, Leroux. With 46 pls. 4to. [*Service des antiquités de l'Égypte.*] — **B. P. Grenfell** and **A. S. Hunt**, The Amherst Papyri. Being an account of the Greek papyri in the collection of the R. H. Lord Amherst of Hackney at Didlington Hall, Norfolk. Part 2: Classical fragments and documents of the Ptolemaic, Roman, and Byzantine periods. With an appendix containing theological fragments. London, 1901, Frowde. 25 pls. 4to. — **F. Ll. Griffith**, see **Petrie** and **Egypt Exploration Fund**.

A. S. Hunt, see **Grenfell**.

A. C. Mace, see **Petrie**.

W. M. Flinders Petrie, The Royal Tombs of the Earliest Dynasties, 1901. Part II. With a chapter by F. Ll. Griffith. (Twenty-first Memoir of the Egypt Exploration Fund.) London, 1901. viii, 60 pp.; 63 pls. 4to. — **Diospolis Parva**. The Cemeteries of Abadiyeh and Hu, 1898–99. With a chapter by A. C. Mace. (Special extra publication of the Egypt Exploration Fund.) London, 1901. 62 pp.; 49 pls. Folio.

Service des Antiquités de l'Égypte. Catalogue général des antiquités égyptiennes du Musée du Caire. No. 25,001–25,385. Ostraka par G. Daressy. Le Caire, 1901. 108 pp.; 67 pls. 4to.

ORIENTAL ARCHAEOLOGY

- W. Belck**, Beiträge zur alten Geographie und Geschichte Vorderasiens. I, v, 56 pp.; II, iii, pp. 57–112. Leipzig, 1901, Pfeiffer. 8vo. — **O. Benndorf**, see *Tituli Asiae Minoris*.
- C. Clermont-Ganneau**, Recueil d'archéologie orientale. Tome 4. 11^e à 15^e livraison. Paris, 1901, E. Leroux. pp. 161–240; pls.; figs. — **A. W. Cooke**, Palestine in Geography and History. London, Kelly. 208 pp.; 8 maps. 2s. 6d.
- Edward Day**, The Social Life of the He-

brews. New York, 1901, Scribners. viii, 255 pp. 8vo. \$1.25. — **Délégation en Perse**, Mémoires publiés sous la direction de M. J. de Morgan. Tome I. Recherches archéologiques. Première série. Fouilles à Suse en 1897–1898 et 1898–1899 par J. de Morgan, G. Jéquier et G. Lampre. Paris, 1900, E. Leroux. x, 202 pp.; 22 pls.; 425 figs. 4to. — **F. Delitzsch**, Babylon. 2. Abdruck verm. durch ein Nachwort. Leipzig, 1901, J. C. Heinrichs'sche Buchh. 25 pp.; 1

- map; 2 figs. 8vo. — **René Dussand** and **Frédéric Macler**, *Voyage archéologique au Sâfâ et dans le Djebel Ed-Drûz*. Paris, 1901, Leroux. 224 pp.; map; 17 pls.; 12 figs. 8vo.
- Ed. Glaser**, *Jehowah-Jovis und die drei Söhne Noah's*. Ein Beitrag zur vergleichenden Götterlehre. Munich, 1901, G. Frantz. 28 pp. 8vo.
- L. Heuzey**, *Une villa royale chaldéenne vers l'an 4000 avant notre ère d'après les levés et les notes de M. de Sarzec*. Paris, 1900, E. Leroux. vii, 96 pp.; 2 pls.; 59 figs. 4to.
- G. Jéquier**, see *Délégation en Perse*.
- E. Kalinka**, see *Tituli Asiae Minoris*.
- G. Lampre**, see *Délégation en Perse*. — **W. v. Landau**, *Die Phönizier*. (Orient, Der alte, II Jahrg. 4. Heft.) Leipzig, 1901, J. C. Hinrichs Verl. 32 pp. 8vo. — **C. F. Lehmann**, *Armenien u. Nordmesopotamien in Altertum und Gegenwart*. (Abteilung Berlin-Charlottenburg der Deutschen Kolonial-Gesellschaft. Verhandlungen 1900-01, Heft 4.) Berlin, 1900, D. Reimer. pp. 83-103. 8vo.
- F. Macler**, see *Dussand*. — **E. Magri**, *Three Punic Inscriptions rediscovered in Malta*. Malta, 1901. 32 pp.; 1 pl. 8vo. — **J. de Morgan**, see *Délégation en Perse*.
- L. B. Paton**, *The Early History of Syria and Palestine*. [Semitic Series.] New York, 1901, Charles Scribner's Sons. 302 pp. 8vo. \$1.25.
- K. Reichel**, *Die geschichtlichen und jetzigen Verkehrswege aus dem Euphrat-Tigris-Becken nach den angrenzenden Ländern*. Programm der städtischen höheren Lehr-Anstalt in Charlottenburg 1900. pp. 3-20; 2 maps. 4to. — **R. W. Rogers**, *A History of Babylonia and Assyria*. 2 ed. New York, 1901, Eaton & Mains. Vol. I: xx, 429 pp. Vol. II: xv, 418 pp. \$5.00.
- Sculptures, Assyrian**. London, 1901, H. Kleinmann & Co. No. 1: 15 pls.; 12 pp. text in German, French, and English (signed K. v. L.). 4to. — **E. Speck**, *Handelsgeschichte des Altertums*. 1 Bd.; Die orientalischen Völker. Leipzig, 1900, Bandstetter. viii, 591 pp. 8vo.
- Tituli Asiae Minoris**. Conlecti et editi auspiciis Caesareae Academiae Litterarum Vindobonensis. Vol. I. *Tituli Lyciae, lingua lycia conscripti*. Enarravit E. Kalinka. *Tabulam ad Henrici Kiepert exemplum redactam adiecit R. Heberdey*. (Praefatio: O. Benndorf.) Vindobonae, MDCCCCI, in aedibus A. Hoelderi. vi, 136 pp.; 1 map. — **E. Trampe**, *Syrien vor dem Eindringen der Israeliten*. II. *Studien zu den Thontafeln von Tell-el-Amarna*.) Programme. Berlin, 1901. 29 pp. 4to.
- H. Winckler**, *Altorientalische Forschungen*. 2. Reihe. III. Bd. 2. Heft. v and pp. 433-579. 3. Reihe. I. Bd. 1. Heft. 96 pp. Leipzig, 1901, E. Pfeiffer. 8vo.
- H. Zimmern**, *Biblische u. babylonische Urgeschichte*. (Der alte Orient II, 3.) Leipzig, 1901, Heirichs. 40 pp. 8vo.

CLASSICAL ARCHAEOLOGY

GREEK AND ROMAN

(Works treating of the monuments of the Greeks and Romans, but not exclusively of those of either.)

P. Arndt, see *Brunn*.

A. Blanchet, see *Congrès international de numismatique*. — **G. Botti**, *Catalogue des Monuments exposés au Musée Gréco-romain d'Alexandrie (Égypte)*. Alexandria, 1900. 586 pp.; 1 plan; pls. 8vo. — **F. Bruckmann**, see *Brunn*. — **Brunn-Arndt-Bruckmann**, *Griechische und römische Porträts*. Liefg. 52. Nr. 511-512. Unbekannter Römer. A. B. Rom, Vatican. 513-514. Unbekannter Römer. A. B. Rom, Vatican. 515-616. Unbekannter

Römer. A. B. Rom, Vatican. 517-518. Unbekannter Römer. A. B. Kopenhagen, Glyptothek Ny Carlsberg. 519-520. Unbekannter Römer. A. B. Florenz, Uffizien. — Liefg. 53. 521-522. Caesar (?). A. B. München, Residenz. 523-524. Pompeius (?) Kopenhagen, Glyptothek Ny Carlsberg. 525. Antinous. Neapel. 526-527. Kopf der Statue Taf. 525. A. u. B. 528. Sog. Antinous. Rom, Capitol. 529-530. Kopf der Statue Taf. 528. A. u. B. — Liefg. 54. No. 531-532. Unbekannte Griechin. München. Sammlung F. A. v. Kaulbach, A. B. 533-534. Unbekannte Griechin. Rom, Vatican. A. B. 535-536. Unbekannte Griechin (?). Neapel. A. B. 537-538. Unbe-

- kannte Griechin. Neapel. A. B. 539-540. Unbekannte Griechin. Athen. Nationalmuseum. A. B. — Liefg. 55. No. 541-542. Unbekannter Grieche, sogen. Pherekydes. A. B. Madrid, Prado. 543-544. Unbekannter Grieche. Aranjuez. A. B. 545-546. Unbekannter Grieche. Berlin. A. B. 547-548. Unbekannter Grieche. Aranjuez. A. B. 549-550. Unbekannter Grieche. Aranjuez. A. B. — **Brunn-Bruckmann-Arndt**, Denkmäler griechischer und römischer Sculptur. — Liefg. CI. No. 501. Archaischer Kopf. Rom, Vatican. 502. Statuen der Athena. Madrid, Prado. Rom, Thermenmuseum. 503. Reliefs vom Westfries des Parthenon. 504. Jünglingskopf. Berlin, Kgl. Museen. 505. Statue eines Hermaphroditen. Rom, Thermenmuseum. — Liefg. CII. 506. Archaischer Jünglingskopf. Neapel. 507. Statue der Hera (?). Wien, Kunstakademie. 508. Weiblicher Kopf. Schloss Wörlitz bei Dessau. 509. Bärtiger Götterkopf. München, Sammlung F. A. v. Kaulbach. 510. Statue des Endymion. Stockholm. — Liefg. CIII. 511. Statue der Athena Parthenos. Madrid, Prado. 512. Statue der Athena Parthenos. Paris. 513. Attisches Grabrelief. Athen, Nationalmuseum. 514. Bronzestatue eines Knaben. Madrid, Prado. 515. Kopf eines sterbenden Persers. Rom, Thermenmuseum. — Liefg. CIV. 516. Archaisches Relief aus Paros. Leipzig, Sammlung Max Klinger. Archaisches Relief. Rom, Villa Albani. 517. Bärtiger Kopf. London, British Museum. 518. Grabrelief des Prokleides. Athen, Nationalmuseum. 519. Jünglingsstatue aus Eretria. Athen, Nationalmuseum. 520. Sog. Knöchelspielerin. Rom, Palazzo Colonna. — Liefg. CV. 521. Statue einer Wettläuferin. Rom, Vatican. 522. Reliefs am Westfries des Parthenon. 523. Statue eines Apoxyomenos. Florenz, Uffizien. 524. Kopf der Statue Taf. 523. 525. Zwei weibliche Köpfe. Athen, Nationalmuseum.
- Le Comte de Castellane**, see **Congrès international de numismatique**. — **Collection d'Antiquités grecques et romaines** provenant de Naples. Paris, 1901, Macon, Protat frères, impr. 415 nos. 87 pp.; 10 pls.; 40 figs. 20 fr. [Auction catalogue. Sale March 18-20, 1901, at the Hôtel Drouot.] — **Collection du Comte Franz von Wotoch. Monnaies grecques et romaines**. Paris, 1901. 44 pp.; 6 pls.; 10 figs. [Sale catalogue of 430 coins.] — **Congrès international de numismatique** réuni à Paris, en 1900. Procès verbaux et mémoires publiés par M. M. le Comte de Castellane et A. Blanchet. Paris, 1900. 8vo. [Contains: E. Gabrici, Le rôle de la numismatique dans le mouvement scientifique contemporain. pp. 35-50. — F. de Villenoisy, De la fabrication des monnaies antiques. pp. 51-62; pl. i; 2 figs. — I. Leite de Vasconcellos, Les monnaies de la Lusitanie portugaise. pp. 63-78; 22 figs. — C. Casati de Casatis, Numismatique étrusque. Vues générales. pp. 99-103; 5 figs. — C. Patsch, Contribution à la numismatique de Byllis et d'Apollonia. pp. 104-114; pl. iii; 1 map. — M. C. Soutzo, Poids et monnaies de Tomis. pp. 115-148; pls. iv-v; 10 figs. — P. Perdrizet, Tragilos. pp. 149-154; 1 fig. — F. Gneccchi, I bronzi quadrilateri della repubblica e la moneta privata dei Romani. pp. 164-169. — S. Ricci, Intorno all' influenza dei tipi monetari greci su quelli della repubblica Romana. pp. 170-204. — R. Mowat, La reconstitution de collections de coins aux I^{er} et II^e siècles. pp. 210-226. — O. Voetter, Les monnaies de Gallien et des membres de sa famille. pp. 227-234; pl. vi-xxiv. — A. L. Delattre, Poids antiques de bronze trouvés à Carthage. pp. 235-236.]
- Ch. Daremberg et E. Saglio**, Dictionnaire des antiquités grecques et romaines. 28^e et 29^e fasc. Paris, 1901, Hachette. Tome IV: pp. 881-1204; 134 figs. 4to.
- A. Héron de Villefosse et E. Michon**, Musée du Louvre. Département des Antiquités grecques et romaines. Acquisitions de l'année 1900. Paris, 1901. 21 pp. 8vo. — **E. Herrmann**, Säulenordnungen der Griechen u. Römer. Vorlagen für den Unterricht u. zum Selbstunterricht. Dresden, 1901, G. Kühnmann. 4 pp.; 18 pls. Folio. — **A. Holm**, Storia della Sicilia. Vol. II, 2. III, 1. Turin, 1901. — **J. Humbert**, Mythologie grecque et romaine. Nouvelle édition avec préface par H. Thédénat. Paris, 1901, Fontemoing.
- Inscriptiones antiquae orae septentrionalis Ponti Euxini Graecae et Latinae**

- ed. B. Latyschew. Vol. IV. Petro-
poli, 1901.
- G. v. Kieseritsky**, *The Imperial Ermitage. Museum of Ancient Sculpture.* Fourth ed. 436, 184 pp.; 436 (or 462) autotypes. St. Petersburg, 1901. 4to. [Russian.]
- B. Latyschew**, see *Inscriptiones antiquae orae septentrionalis Ponti Euxini.* — **H. Lehner**, *Führer durch das Provinzial-Museum zu Bonn.* Bonn, 1901, C. Georgi. 49 pp.; 1 fig. 8vo. — **F. Leo**, *Die griechisch-römische Biographie nach ihrer litterarischen Form.* Leipzig, 1901, B. G. Teubner. v, 329 pp. 8vo.
- E. Michon**, see *Héron de Villefosse.*
- L. Olivier**, see *En Sicile.*
- G. Patroni and Ch. Rega**, *Vasi dipinti del museo Vivencio, disegnati da Costanzo Angelini nel 1798.* Fasc. 1. Rome-Naples, 1900. 4 pp.; 5 pls. Folio. — **Paulys Real-Encyclopaedie der classischen Altertumswissenschaft. Neue Bearbeitung hrsg. v. G. Wissowa. Stuttgart, 1901. J. B. Metzlerscher Verlag. 8. Halbbd.: *Corniscae-Demodoros.* Coll. 1633-2870 [contains: *Constantinopolis* (Oberhummer); *Cyprasse* (Olck); *Dacia* (Brandis); *Daidalos* (C. Robert); *Danuvius* (Brandis); *Dardanos* (Thraemer); *Delos* (Bürchner and v. Schoeffer); *Delphoi* (Philippson, Hiller v. Gärtringen and Pomtow); *Demeter* (Kern); *Demetrios Poliorketes* (Kaerst); *Demetrios von Phaleron* (Martini)].**
- Rauschen**, *Das griechisch-römische Schulwesen zur Zeit des ausgehenden antiken Heidentums.* Programme, Bonn, 1900. 31 pp. 4to. — **Ch. Rega**, see **Patroni.** — **W. H. Roscher**, *Lexikon der griechischen und römischen Mythologie.* 43 Lieferung. Leipzig, 1901, B. G. Teubner.
- E. Saglio**, see **Daremberg.** — **J. Schwaréz**, *Die Demokratie.* 2 Ausg. I: *Die Demokratie von Athen.* xc, 749 pp. II: *Die römische Massenherrschaft.* lxxxviii, 27, 650 pp. Leipzig, 1901, E. Avenarius. 8vo. — **En Sicile**, *Guide du savant et du touriste.* Ouvrage publié sous la direction de L. Olivier, par L. Caberti, Ch. Djoh, Ch. Diehl, F. Fouqué, E. Haug, Oct. Join-Lambert, H. Léonardon, Vicomte Combes de Lestrade, A. Leroy-Beaulieu, Machat, G. Perrot, Vidal de la Blache, G. Yvez. Paris, 1901, Flammarion. 128 figs. and plans. 8vo. — **A. H. Smith**, *A Catalogue of Sculpture in the department of Greek and Roman antiquities in the British Museum.* London, 1900. Vol. II: ix, 264 pp.; 27 pls.; 11 figs. 8vo. — **E. Speck**, *Handels-geschichte des Altertums.* 2. Bd.: *Die Griechen.* Leipzig, 1901, F. Brandstetter. viii, 582 pp. 8vo. — **L. Stieda**, *Anatomisch-archäologische Studien.* I. *Über die ältesten bildlichen Darstellungen der Leber.* II. *Anatomisches über alt-italische Weihgeschenke (Donaria).* (From the *Anatomische Hefte.*) Weisbaden, 1901. iv, 131 pp.; 4 pls. 8vo.
- H. Thédénat**, see **J. Humbert.**
- N. Villani**, *Il piede e lo stadio attraverso i secoli e il sistema antico delle misure romane.* Lanciano, 1901. 8vo.
- U. v. Wilamowitz-Moellendorf**, *Reden u. Vorträge.* Berlin, 1901, Weidmann'sche Buchh. vii, 278 pp. 8vo.

GREEK

(Including also titles of works relating to pre-Hellenic inhabitants of Greece and to kindred peoples, and to monuments of Greek art wherever found.)

I. GENERAL AND MISCELLANEOUS

- S. Ambrosoli**, *Atene. Brevi cenni sulla città antica e moderna seguiti da un saggio di bibliografia descrittiva e da una appendice numismatica.* Milano, 1901, U. Hoepli. lv, 170 pp.; 22 pls.; 3 plans; 13 figs. 8vo. — **O. Apelt**, *Die Ansichten der griechischen Philosophen über den Anfang der Kultur.* Programme, Eisenach, 1901. 28 pp. 4to. — **E. Ardaillon and H. Convert**, *Carte archéologique de l'île de Délos levée en 1893-94.* Dessinée par E. Létot. Échelle de 1 : 2000 (Bibliothèque des Écoles franç. d'Athènes et de Rome. Append.). Paris, 1901, A. Fontemoing. 3 colored maps, 70 × 90 cm. Folio. — **A. Avelardi**, *La più antica leggenda di Elena (note di mitologia e storia antica).* Livorno, 1901. 10 pp. 8vo.
- A. Baratonio**, *Alle fonti dell' arte; studi di psicologia etica su Omero.* Turin, 1900, Rosenberg & Sellier. 119 pp. 8vo. — **Brinckmeier**, *Heinrich Schliemann und die Ausgrabungen auf Hissarlik; pp. 9-32.* Programme, Burg, 1901. 4to.
- Le Cinquantenaire**, *De l'École française d'Athènes. Supplément au*

- Bulletin de Correspondance Hellénique, 1898. Paris, 1900, Fontemoing. cviii pp. 8vo. — **H. Convert**, see **Ardaillon**. — **St. Cybulski**, Das Kriegswesen der alten Griechen. Erklärender Text zu I u. II der Tabulae quibus antiquitates graecae et romanae illustrantur. 2. Aufl. Leipzig, 1901, K. F. Köhler. 32 pp.; 13 figs. 8vo.
- F. Duemmler**, Kleine Schriften. Leipzig, 1901, S. Hirzel. 1. Bd.: Zur Einführung (F. Studniczka), xxxiv pp. Zur griechischen Philosophie. (Hrsg. v. K. Joël.) vi, 356 pp.; 1 portrait. 2. Bd.: Philologische Beiträge. (Hrsg. v. O. Kern.) viii, 550 pp.; 1 pl.; 4 figs. 3. Bd.: Archäologische Aufsätze. (Hrsg. v. J. Boehlau.) viii, 374 pp.; 12 pls.; 176 figs.
- Festschrift**, S. K. H. dem Prinzregenten Luitpold von Bayern zum 80. Geburtstage dargebracht von der Universität Erlangen. IV, 1. Philosophische Fakultät, 1. Section. Erlangen, A. Deichert'sche Verlagsbuchh. Nachf., 1901. 8vo. [Contains: A. Flasch, Die sog. Spinnerin, Erzbild in der Glyptothek König Ludwigs I zu München. Ein Werk des Praxiteles, pp. 117–138; 2 figs. — A. Roemer, Homerische Gestalten und Gestaltungen, pp. 163–182.] — **Festschrift**, Strassburger, zur XLVI. Versammlung deutscher Philologen und Schulmänner hrsg. v. der Philosophischen Fakultät der Kaiser Wilhelms-Universität. Strassburg, 1901, K. J. Trübner. 332 pp. 8vo. [Partial contents: A. Michaelis, Georg Zoegas Betrachtungen über Homer, pp. 1–12; 2 figs. — E. Schwartz, Agamemnon von Sparta und Orestes von Tegea in der Telemachie, pp. 23–28. — B. Keil, Eine Zahlentafel von der athenischen Akropolis, pp. 117–182; 1 pl. — E. Thraemer, Die Form des hesiodischen Wagens, pp. 299–308; 4 figs.] — **E. Fischer**, Archäologische Erinnerungen an eine Studienreise nach Griechenland. Breslau, 1901. 40 pp.; 1 map. 4to. — **A. Flasch**, see **Festschrift** S. K. H. dem Prinzregenten, Luitpold . . . dargebracht. — **P. Foucart**, Les grands mystères d'Éleusis. Personnel; Cérémonies. Paris, 1900, Klincksieck 156 pp. 4to. — **H. Francotte**, L'industrie dans la Grèce ancienne. Tom. 2. (Bibliothèque de la Faculté de philosophie et lettres de l'Université de Liège, fasc. VIII). Brussels, 1901. vi, 376 pp. 8vo. — **J. Frei**, De certaminibus thymelicis. [Dissertation.] Basel, 1900. 78 pp. — **Fund**, The Cretan Exploration. [Prospectus.] London. 8 pp.; 2 figs. 4to.
- G. B. Grundy**, The Great Persian War and its Preliminaries; a study of the evidence, literary and topographical. London, 1901, J. Murray. xiii, 591 pp.; 31 pls. 8vo. — **P. Guiraud**, La main-d'œuvre industrielle dans l'ancienne Grèce. (Université de Paris. Bibliothèque de la Faculté des Lettres, 12.) Paris, 1900, F. Alcan. 217 pp. 8vo.
- H. R. Hall**, The Oldest Civilization of Greece. Studies of the Mycenaean age. London, 1901, D. Nutt. xxxiv, 346 pp.; 1 pl.; 75 figs.; 1 table. 8vo. — **Harvard Studies** in Classical Philology, Vol. XII, 1901. 352 pp. 8vo. Cambridge, Mass. Published by the University. \$1.50. [Contains among other things: H. N. Fowler, the Origin of the Statements contained in Plutarch's Life of Pericles, Chap. XIII; pp. 211–220. — J. R. Wheeler, Notes on the So-called Capuchin Plans of Athens; pp. 221–230; 2 pls. — W. N. Bates, Notes on the Old Temple of Athena on the Acropolis; pp. 319–326. — J. C. Hoppin, Argos, Io and the Prometheus of Aeschylus; pp. 335–345; pl.] — **R. Hecht**, Zur Wahrung des kulturgeschichtlichen Kolorits im griechischen Drama. II. Sophokles. Programm Tilsit, 1900. 44 pp. 4to. — **R. Heberdey**, see **Reichel**. — **F. Frhr. v. Hiller von Gærtringen**, Ausgrabungen in Griechenland. Vortrag gehalten am 17. Nov. 1900 in der Aula der Univ. Rostock zum Besten der Errichtung einer Bismarcksäule. Berlin, 1901, G. Reimer. 38 pp.; 1 pl. 8vo. — **W. M. L. Hutchinson**, Aëacus. A Judge of the Underworld. Cambridge, 1901, Macmillan & Bowes. 48 pp. 8vo.
- M. Jerace**, La ginnastica e l'arte greca. Turin, 1900, Bocca. 8vo.
- II. Καββαδίας**, Ἱστορία τῆς ἀρχαιολογικῆς ἐταιρείας ἀπὸ τῆς ἐν ἔτει 1837 ἰδρύσεως αὐτῆς μέχρι τοῦ 1900. Athens, 1900, Perres. — **I. Kaerst**, Geschichte des hellenistischen Zeitalters. Leipzig, 1901, B. G. Teubner. 1 Bd.: Die Grundlagen des Hellenismus. x, 433 pp. 8vo. — **Ed. Kammer**, Ein Aesthetischer Kommentar zu

- Homers Ilias. 2. Aufl. Paderborn, 1901, E. Schöningh. xii, 346 pp.; 1 pl. 8vo. — **A. H. Kan**, De Jovis Dolicheni cultu. Groningen, 1901, Wolters. — **Br. Keil**, Anonymus Argentinensis. Fragmente zur Geschichte des Perikleischen Athen aus einem Strassburger Papyrus. Strassburg, 1902, K. J. Trübner. x, 341 pp.; 2 pls. 8vo. — **R. Kekule von Stradonitz**, Die Vorstellungen von griechischer Kunst und ihre Wandlung im neunzehnten Jahrhundert. Rede bei Antritt des Rectorats gehalten . . . am 15 Oct. 1901. Berlin, 1901. 30 pp. 4to. — **J. Kirchner**, Prosopographia attica. Vol. prius. Berlin, 1901, G. Reimer. viii, 603 pp. 8vo.
- P. Lacour**, Les Amazones: les Amazones dans la légende et dans l'histoire. Paris, 1901, Perrin. 8vo. — **B. Latyshev**, Scythica et Caucasica e veteribus scriptoribus graecis et latinis collegit et cum versione rossica edidit B. L. Vol. I: Scriptores graeci. fasc. 3; pp. 601-946; 1 map. — **E. Loewy**, Die Naturwiedergabe in der älteren griechischen Kunst. Rome, 1900, Löschner & Co. 60 pp.; 30 figs. 8vo.
- A. Malinin**, Zwei Streitfragen der Topographie von Athen. Berlin, 1900, Reimer. 43 pp. — **Maybaum**, Der Zeuskult in Böotien. Programme, Doberan, 1901. 26 pp. 4to. — **A. Milchhoefer**, Die Tragödien des Aeschylus auf der Bühne. Rede zum Winkelmanns-Tage. Kiel, 1900, Universitäts-Buchh. 14 pp. 8vo.
- B. Niese**, Die Welt des Hellenismus. Rede, gehalten beim Antritt des Rectorats. (Marburger akademische Reden. 1900. Nr. 3.) Marburg, 1900, N. G. Elwert'sche Verlagsbuchhandlung. 24 pp. 8vo. — **Martin P. N. Nilsson**, Studia de Dionysiis Atticis. Lundae, 1900, H. Möller. iv, 165 pp. 8vo. [Dissertation.] — **G. Notor**, La Femme dans l'antiquité grecque. Préface de M. Eugène Müntz. Paris, 1901, Laurens. iv, 284 pp.; 353 figs. 4to.
- A. Odolesco**, Le trésor de Petrossa. Historique; description. Étude sur l'orfèvrerie antique. Paris, 1900, Rothschild. 695 pp.; 16 pls.; 356 figs. Folio. — **A. Olivieri**, La scena in Eschilo secondo gli studj recenti. Catania, 1901. 17 pp. 8vo.
- Pausanias**, Arx Athenarum a P. descripta, in usum scholarum ediderunt O. Jahn et A. Michaelis. Ed. III actis arcis et fasciculo tabularum aucta. Bonn, 1901, A. Marcus and E. Weber. viii, 140, xli pp. 8vo.
- M. Pestalozza**, La vita economica ateniese dalla fine del sec. VII alla fine del IV sec. a. C. Milan, 1901. 115 pp. 8vo. — **H. Pomtow**, Delphische Chronologie. (From Pauly-Wissowa's Realencyclopädie der classischen Altertumswissenschaft, Bd. IV.) Stuttgart, 1901, J. B. Metzler. 118 pp. 8vo. — **E. Pottier**, Pourquoi Thésée fut l'ami d'Hercule. Paris, Libr. de l'art ancien et moderne, 1901. 18 pp.; 9 figs. 4to.
- G. Radet**, L'Histoire et l'Œuvre de l'Ecole française d'Athènes. Paris, 1901, Fontemoing. xiv, 493 pp.; 7 pls.; 126 figs. 8vo. — **W. Reichel**, Homerische Waffen. Archaeologische Untersuchungen. 2. völlig umgearb. u. erweiterte Ausg. (hrsg. v. R. Heberdey). Wien, 1901, A. Hölder. x, 172 pp.; 92 figs. 4to. — **C. Robert**, Studien zur Ilias. Mit Beiträgen von Fr. Bechtel. Berlin, 1901, Weidmann'sche Buchh. viii, 591 pp. 8vo. — **A. Roemer**, Ueber den litterarisch-ästhetischen Bildungsgrad des attischen Theaterpublikums. Munich, 1901, Franz. 95 pp. 4to. — See **Festschrift S. K. H.** dem Prinzregenten Luitpold . . . dargebracht. — **E. Rohde**, Kleine Schriften. (Vorrede von Fr. Schoell.) 1. Bd.: Beiträge zur Chronologie, Quellenkunde und Geschichte der griechischen Litteratur. xxxi, 436 pp. 2. Bd.: Beiträge zur Geschichte des Romans und der Novelle, zur Sagen-, Märchen- und Altertums-kunde. 481 pp. Tübingen and Leipzig, 1901, J. C. B. Mohr. 8vo.
- E. Saginati**, Il mito di Herakles in alcune rappresentazioni figurate. Camerino, 1901. 21 pp. 8vo. — **G. St. Clair**, Myths of Greece explained and dated. An embalmed history from Uranus to Perseus including the Eleusinian mysteries. London, 1901, Williams and Norgate. Vol. I: 397 pp.; 27 figs. Vol. II: pp. 403-797; 48 figs. — **F. Schatz**, Die griechischen Götter u. die menschlichen Missgeburten. Vortrag gehalten im Docentenverein der Univ. Rostock am 3. Mai 1901. Weisbaden, 1901, S. F. Bergmann. 59 pp.; 62 figs. 8vo. — **R. v. Schneider**,

Kunsthistorische Sammlungen des Allerhöchsten Kaiserhauses. Ausstellung von Fundstücken aus Ephesos im griechischen Tempel im Volksgarten. Wien, 1901, A. Holzhausen. xv, 19 pp.; 1 pl.; 15 figs.; 1 map. 8vo. — **F. Schoell**, see **E. Rohde**.

— **J. Schreiner**, Homers Odyssee — ein mysteriöses Epos. Elementarskizzen der drei wichtigsten Örtlichkeiten Ὀδυσσεύς, Σχερση, Ἰθάκη auf historisch-geographischer Basis entworfen. Braunschweig, 1901, R. Sattler. 103 pp. 8vo. — **Seeliger**, Bruchstücke eines Reiseführers durch Griechenland um 100 v. Chr. Einladung zur Gedächtnisfeier . . . am 21. Dezember in der Aula des Johanneums zu Zittau. Zittau, 1900. 12 pp. 8vo.

G. Toudouze, Les grandes manifestations de l'art grec: trésors, fêtes religieuses, grandes jeux. (Bibliothèque de la Vie Moderne.) Paris, 1900. 100 pp. 8vo.

M. Vassits, Die Fackel in Kultus und Kunst der Griechen. Munich, 1901. 84 pp. 8vo. — **W. de Visser**, De Graecorum Diis non referentibus Speciem Humanam. Diss. Leyden, 1900. 270 pp. — **K. G. Vollmoeller**, Griechische Kammergräber mit Totenbetten. Bonn, Diss., 1901. 57 pp. 8vo.

E. Wagner, Ein Besuch in dem Heiligtum des Asklepios zu Epidauros. Programme, Wehlau, 1901. — **E. Wilisch**, Beiträge zur Geschichte des alten Korinth. (Handel der älteren Zeit. Wehrkraft.) Programme, Zittau, 1901. 48 pp.; 2 pls. 4to. — **E. Wille**, Mein Ausflug von Athen nach Eleusis, Korinth, Mykenae u. Tiryns in den Sommerferien, 1899. Programme, Neustettin, 1901.

E. Zeiner, Athen. Erklärung einer Reihe von Skioptikonbildern. Programme, Stockerau, 1900. — **Th. Zell**, Polyphem, ein Gorilla. Eine naturwissenschaftliche und staatsrechtliche Untersuchung von Homers Odyssee Buch IX, 105 folg. Berlin, 1901, Junk. 190 pp. 8vo.

II. GREEK ARCHITECTURE

G. Abatino, La colonna del Tempio di Hera Lacinia in Capo Colonna (Cotrone). Napoli, 1901. 15 pp. 8vo. — **F. Adler**, Das Mausoleum zu Halikarnass. Berlin, 1901, Ernst & Sohn. 12 pp.; 5 pls. Folio. —

Der Pharos von Alexandria. Berlin, 1901, Ernst & Sohn. 16 pp.; 3 Taf.; 17 figs. Folio.

R. Borrmann, Der dorische Tempel der Griechen. (Die Baukunst. 4. Heft, 2. Serie.) Berlin, 1901, W. Speemann. 14 pp.; 6 pls.

O. Puchstein, Die griechische Bühne. Eine architektonische Untersuchung. Berlin, 1900, Weidmann. 144 pp.; 43 figs. 4to.

III. GREEK SCULPTURE

J. J. Bernoulli, Griechische Ikonographie mit Ausschluss Alexanders u. der Diadochen. 1. Tl.: Die Bildnisse berühmter Griechen von der Vorzeit bis an das Ende des V. Jahrh. v. Chr. xix, 215 pp.; 26 pls.; 37 figs. 8vo. II. Tl.: Die Bildnisse berühmter Griechen vom IV. Jahrh. v. Chr. bis in die römische Zeit. Munich, 1901, F. Bruckmann. xi, 241 pp.; 33 pls.; 22 figs. 8vo.

Estelle M. Hurl, Greek Sculpture, a collection of sixteen pictures with introduction and interpretation. Boston, 1901, Houghton, Mifflin & Co. 97 pp. 12mo. \$0.75.

R. Kekule von Stradonitz, Über ein Bildnis des Perikles in den Königlichen Museen (61. Programm zum Winkelmannsfeste). Berlin, 1901, G. Reimer. 22 pp.; 3 pls.; 9 figs. 4to.

R. Preiser, Zum Torso von Belvedere. Programme, Gera, 1901. 20 pp.; 1 pl. 4to.

Reichau, Die Entwicklung der Plastik bei den Griechen. Magdeburg, Programme, 1901. — **M. Ruhland**, Die eleusinischen Göttinnen. Entwicklung ihrer Typen in der attischen Plastik. Strassburg, 1901, K. J. Trübner. xi, 108 pp.; 3 pls.; 9 figs. 8vo.

G. Saloman, Die Venus von Milo und die mitgefundenen Hermen. Stockholm, 1901. 35 pp.; 4 pls.; 19 figs. 4to.

IV. GREEK VASES AND PAINTING

J. E. Demartean, Le vase hédonique de Herstal. Liège, 1900, L. Gothier. 25 pp.; 4 pls. 8vo.

A. Furtwängler und **K. Reichhold**, Griechische Vasenmalerei. Auswahl hervorragender Vasenbilder. Mit 60 Phototypie-Tafeln. 1. Liefgr. Text. Munich, 1900, Verlagsanstalt

Bruckmann. 54 pp. 4to. (9 figs.) 10 pls. fol.

G. Gaspar, *Céramique grecque au musée du cinquantenaire*. (From *Revue d'art et de littérature*.) Brussels, 1901, Bulers.

J. H. Huddilston, *Die griechische Tragödie im Lichte der Vasenmalerei*. Übers. v. Maria Hense. Freiburg i. B., 1900, E. Fehsenfeld. xxiii, 215 pp.; 29 figs. 8vo.

A. Negrioli, *Di una pittura vascolare derivata da un originale statuario*. *Nota archeologica*. Bologna, 1900. 16 pp. 8vo.

E. Pottier, *Vases Antiques du Louvre*. 2me Série. Salles E-G. Le style archaïque à figures noires et à figures rouges; écoles ionienne et attique. Paris, 1901, Hachette et Cie. 156 pp.; pls. 52-102. Folio.

K. Reichhold, see A. Furtwängler.

V. GREEK INSCRIPTIONS

R. Cagnat, see *Inscriptiones graecae ad res Romanas pertinentes*.

W. Dittenberger, see *Sylloge inscriptionum graecarum*.

E. L. Hicks and G. F. Hill, *A Manual of Greek Historical Inscriptions*. New and revised ed. Oxford, 1901, Clarendon Press.

Inscriptiones graecae ad res Romanas pertinentes. Auctoritate et impensis Academiae inscriptionum et litterarum humaniorum collectae et editae. Tomus primus, fasc. I. (Hunc fasciculum edendum curavit R. Cagnat auxiliante J. Toutain.) Paris, 1901, E. Leroux. 128 pp. 4to.

P. N. Papageorgiu, *Unedirte Inschriften von Mytilene*. Mit 1 Taf. eines Athenakopfes in Lichtdr., 14 Abb. im Texte u. 7 Inschriften-Taf. Leipzig, 1900, B. G. Teubner. xiv, 31 pp. 8vo.

Sylloge inscriptionum Graecarum iterum edita G. Dittenberger. Vol. III. Indices. Lipsiae, MDCCCXI, apud S. Hirzelium. 462 pp. 8vo.

C. Wesseley, *Papyrorum scripturae graecae specimina isagogica*. Lipsiae, 1900, apud E. Avenarium. 7 pp.; 17 pls. Folio.

VI. GREEK COINS

Catalogue of the Collection of Greek Coins in Gold, Silver, Electrum, and Bronze of a Late Collector. London, 1900. 67 pp.; 9 pls. 4to. — *Collection* Ernst Prinz zu Windisch-

Graetz. V. Bd.: *Griechische Münzen*. Beschrieben von J. Scholz. iv, 196 pp. (Taf. i). Anhang zu dem Band (V) *Griechen: Die Prägungen der Barbaren*. Beschrieben u. bearb. v. Ed. Fiala. Prag, 1899 and 1900. pp. 197-214; Pls. ii-iv. 8vo.

G. Dattari, *Monete imperiali greche*. Numi Augg. Alexandrini. *Catalogo della collezione G. Dattari compilato dal proprietario*. Cairo, 1901. (Vol. I, text, xii, 471 pp.; Vol. II, pls. i-xxxvii.) Folio. — H. J. de Dompierre de Chaufepié, *Griechische münzen in historische orde gerangschikt*. Haarlem, 1901, H. Kleinmann & Co. 24 pp.; 15 pls. 4to.

Ed. Fiala, see *Collection* Ernst Prinz zu Windisch-Graetz.

F. Imhoof-Blumer, *Kleinasiatische Münzen*. (Sonderschritten des Oesterreichischen archaeologischen Institutes in Wien, Bd. 1.) Bd. 1. Vienna, 1901, A. Hölder. 302 pp.; 9 pls. 4to.

I. Scholz, see *Collection* Ernst Prinz zu Windisch-Graetz.

ROMAN

(Including also titles of works relating to the monuments of the Etruscans and other peoples who inhabited Italy before or contemporaneously with the Romans, as well as to Roman monuments outside of Italy.)

I. GENERAL AND MISCELLANEOUS

A. Amato, *Dei Bruzi. Ricerche storiche*. Reggio di Calabria, 1901. 69 pp. 8vo. — A. Audollent, *Carthage romaine* (146 avant Jésus-Christ-698 après J.-Chr.). (Bibliothèque des Écoles françaises d'Athènes et de Rome, fasc. 84.) Paris, 1901, Fontemoing. xxxii, 834 pp.; 3 maps. 8vo.

V. Balzano, *Dove fu Aufidena? Castel di Sangro*, 1901. 34 pp. 8vo. — F. Bertolini, *Storia Romana*. Re e repubblica. (Storia Politica d'Italia.) Milan, 1901, F. Vallardi. 554 pp. 8vo. — A. de Blasio, *L'uomo preistorico in Terra di Bari*. Naples, 1901. 8vo. — E. Borghi, *La verità sulle navi romane del lago di Nemi*. Rome, 1901. 66 pp.; 9 figs. 4to. — E. Brizio, *Epoca preistorica* (Storia politica d'Italia). Milan, 1901. F. Vallardi. xii,

- xxxxix pp. 8vo. — **T. Brogi**, *La Marsica*. Rome, 1900. 436 pp. 8vo.
- E. Caetani-Lovatelli**, *Attraverso il mondo antico*. Rome, 1901. 347 pp. 8vo. [Contents: Amore e Psiche. — Tramonto romano. — La festa delle rose. — Di una mano votiva in bronzo. — Il culto delle pietre. — La Casa Aurea di Nerone. — Il culto degli alberi. — I Ludi secolari. — Ai colombari della Vigna Codini. — Frammento di rilievo rappresentante una scena gladiatoria. — Di due rilievi gladiatorii. — Urna marmorea con rappresentanze di trofei. — Antica epigrafia spicciola.] — **Consoli**, *Neologismi botanici nei carni bucolici e georgici di Virgilio*. Palermo, 1901. 140 pp. 8vo. — **F. Cramer**, *Rheinische Ortsnamen aus vorrömischer und römischer Zeit*. Düsseldorf, 1901, I. Lintz. 173 pp. 8vo. — **Em. Curâtulo**, *L'arte di Juno Lucina in Roma. Storia dell'ostetricia in Roma dalle sue origini fino al secolo XX*. Rome, 1901. 248 pp.; 2 pls. 8vo.
- Eporodiensia**. Pinerolo, 1900. xxxvii, 520 pp. 8vo. [Partial contents: Il nome d' Ivrea. — De Jordanis, *Le iscrizioni romane e cristiane d' Ivrea, con uno studio d' Ivrea romana*.]
- E. Fabricius**, see **Sarwey**. — **G. Ferrari**, *L'incendio di Roma e i primi cristiani*. Turin, 1901. 32 pp. 8vo. — **R. Foglietti**, *Storia di Macerata*. Vol. I. *Storia antica*. Turin, 1900. 144 pp. 8vo. — **G. Fregni**, *Modena romana ai tempi dell' imperatore Cesare Ottaviano Augusto; su di un cippo sepolcrale scopertosi in Villa Cognoto 1900*. Modena, 1901. 34 pp. 8vo. — **J. Fregni**, *Archeologia messinese: di una iscrizione detta di lingua Osca in una vecchia lapide della via Cardines in Messina*. Modena, 1900. 20 pp. 8vo.
- P. Garofalo**, *Le vie romane in Sicilia*. Naples, 1901. 8vo. — **P. Gauckler**, *Régence de Tunis. Direction des Antiquités et des Beaux-Arts. Enquête sur les installations hydrauliques romaines en Tunisie*. V. Tunis, 1901. pp. 301-347; 21 figs. — **J. Gentile**, *Trattato generale di archeologia e storia dell' arte italica, etrusca e romana*. Terza edizione per cura del Prof. S. Ricci. Milan, 1901, Hoepli. xxiv, 346 pp.; 18 pls. 16mo. — **G. B. Giovenale**, *I monumenti preromani del Lazio (from: Dissertazioni della Ponteficia Acc. di Archeologia, ser. 2, tomo VII)*. 4 pls. — **Giuria**, *Le navi romane nel lago di Nemi*. Florence, 1901. 19 pp.; 1 pl. 8vo. — **A. Gnirs**, *Römische Wasserversorgungsanlagen im südlichen Istrien*. Pola, 1901. 27 pp.; 2 pls. 8vo. — **F. Gori**, *Relazione delle ultime scoperte di antichità nella regione Sabina (Estr. dalla 'Vita Sabina' anno II, num. 3. 4. 5. 6)*. Rieti, 1900. 7 pp. 4to. — **Aveneau de la Grancière**, *Notes d'archéologie romaine (I. Statuette en bronze d'orateur. II. Inscriptions relatives à deux magistrats vénètes. III. Tête en marbre d'Aphrodite)*. Vannes, 1901. 18 pp.; 2 pls. 8vo. — **A. H. J. Greenidge**, *Roman Public Life*. London, 1901, Macmillan & Co. xx, 483 pp. 8vo. — **H. Gross**, *Der Raritätenbetrug*. Berlin, 1901, J. Guttentag. viii, 288 pp. 8vo. — **St. Gsell**, *L'Algérie dans l'antiquité*. Alger. 1900. 84 pp. 8vo. — **L. Gurlitt**, *Anschauungstafeln zu Caesars bellum Gallicum. III. Caesaris cum Ariovisto colloquium. IV. Vercingetorix cum nonnullis principibus Gallorum. V. Exercitus Caesaris in Britanniam expositur. VI. Avaricum a Caesare oppugatum*. Gotha, 1901, F. A. Perthes. — **P. Gusman**, *Pompei. The City, Its Life and Arts*. Translated by F. Simmonds and M. Jourdain. London, 1901. 440 pp.; 12 pls.; 500 figs. Folio.
- E. Haugwitz**, *Der Palatin, seine Geschichte u. seine Ruinen. Mit einem Vorwort von Chr. Huelsen*. Rome, 1901, Loescher. xiv, 782 pp. 8vo. — **F. Haverfield**, *Romano-British Norfolk in: A. Doubleday, The Victoria History of Norfolk, Vol. I*, pp. 279-323; 33 figs.; 1 map. Westminster, 1901. 4to. — **F. Hettner**, see **Sarwey**. — **Chr. Huelsen**, *Romae veteris tabula in usum scholarum descripta. Wandplan von Rom mit 2 Spezialplänen: Urbis incrementa regionatim descripta, Urbis pars media duplici maioris tabulae modulo descripta*. Berlin, 1901, D. Reimer. 4 leaves à 64 × 85 cm. — **Ed. Hula**, *Römische Altertümer. Mit einem Plane der Stadt Rom u. 60 Abb.* Leipzig, 1901, G. Freytag. iv, 120 pp. 8vo.
- A. M. Jannacchini**, *Storia di Telesia*. Benevento, 1900. 296 pp. 8vo. —

- Léon Joulin**, *Les Établissements Gallo-romains de la plaine de Martres-Tolosanes*. [Extr. des Mémoires présentés par divers savants à l'Académie des Inscriptions et Belles-lettres, 1^{re} Série, Tome XI, 1^{re} partie.] Paris, 1900. C. Klincksieck. 300 pp.; 25 pls.; 27 plans. 18.80 fr.
- F. Kenner**, Bericht über römische Funde in Wien in den J. 1896-1900. Vienna, 1900, W. Braumüller. vi, 91 pp., 1 pl.; 93 figs. 4to. — **H. Kiepert**, *Formae orbis antiqui*. XIX. Italia inferior cum insulis. Ergänzt u. hrsg. von R. Kiepert. Berlin, 1901, D. Reimer. 43 x 56 cm., nebst Text. 5 pp. Folio. — **F. Knoke**, Eine Eisenschmelze im Habichtswalde bei Stift Leeden. Berlin, 1901, R. Gaertner. 30 pp.; 1 pl. 8vo. — **F. Koepp**, Über die römische Niederlassung bei Haltern an der Lippe. Vortrag, gehalten im Westfälischen Provinzial-Verein für Wissenschaft und Kunst zu Münster i. W. am 28. Januar 1901. Münster i. W., Aschendorffsche Buchdruckerei. 28 pp. 8vo.
- Ad. Lehmann**, Kulturgeschichtliche Bilder. II. Abth. Alte Geschichte. Im römischen Lager. Leipzig, 1901, F. E. Wachsmuth. 60 x 82 cm.; colored pl.
- M. Mariani**, *Intorno agli antichi Camertiumbri*. Camerino, 1900. 87 pp. 8vo. — **Or. Marruchi**, Di alcuni antichi monumenti tuttora superstiti relativi alla storia di Roma. Rome, 1901. 128 pp. 8vo. — **V. Messina**, *Catania vetusta: studio critico*. Catania, 1901. 186 pp. 8vo. — **Monumenta Pompeiana. Leipzig, 1901, G. Hedeler. No. 1: 3 pls., folio, with one leaf each of text in Italian, French, German, and English. — **A. Mori**, *Vetulonia etrusca*. Sciacca, 1900. 52 pp. 8vo.**
- A. Negrioli**, *Dei genii presso i Romani*. Ricerche archeologiche. Bologna, 1900. 76 pp. 8vo. — **D. Novak**, *Fouilles d'une villa Romaine*. (Publications de l'Association historique de l'Afrique du Nord III.) Paris, 1901, E. Leroux. 20 pp.; 1 pl.; 8 figs. 8vo.
- G. Oberziner**, *Origine della plebe romana*. Leipzig, 1901, F. A. Brockhaus. 232 pp. 8vo.
- E. Pais**, *Gli elementi italici sannitici e campani nella più antica civiltà romana* (Memoria letta all' Acc. di Napoli il 5. dic. 1899 e 16. genn. 1900). Naples, 1900. 4to. — Per la storia di Napoli e d' Ischia nell' età Sillana. (Memoria letta all' Accademia di Archeologia l' 8. maggio 1900.) Naples, 1900. 8 pp. 4to. — **A. Palma**, *Pompei. Musaico dal vero*. 2 leaves text; 1 pl. Folio. — **Fr. di Palma**, *Statio ad Pirum. Quisquilie di topografia antica*. Florence, 1901. 20 pp. — **L. Pernard**, *Le Droit romain et le Droit grec, dans le théâtre de Plaute et Térence*. Thèse, Lyon, 1900. 234 pp. 8vo. — **V. Poggi**, *Le due riviere ossia la Liguria Marittima nell' epoca romana*. Genoa, 1901. 136 pp. 8vo. — **A. Prosdoci**, *Il sepolceto romano dei Blattii nel campo Fregoso presso Monselie*. Este, 1901. 15 pp. 8vo. — **S. Puglisi Marino**, *I Siculi nelle tradizioni greca e romana*. Saggio storico ed archeologico. Catania, 1900, Mattei. 37 pp. 8vo. — **B. Punturo**, *L' antica Nisa e Nissa e l'odierna Caltanissetta*. Caltanissetta, 1901. 299 pp. 4to.
- S. Ricci**, *La necropoli di Legnano, contributi alla storia della civiltà preromana e romana nella Lombardia*. Milan, 1901. 15 pp.; 4 pls. 8vo. — **O. Richter**, *Topographie der Stadt Rom*. 2 verm. u. verb. Aufl. (Handbuch der klassischen Altertumswissenschaft, 3. Bd. 3. Abt. 2. Hälfte.) Munich, 1901, C. H. Beck. vi, 411 pp.; 8 pls.; 2 plans; 32 figs. 8vo. — **A. Riegl**, *Die spätromische Kunst-Industrie nach den Funden in Österreich-Ungarn*. 1. Th. Vienna, 1901, Hof- u. Staatsdruckerei. vi, 222 pp.; 23 pls.; 100 figs. Folio. — **Roman Forum Exploration Fund**. Reprint of the official reports on the Aedes Vestae and Fons Juturnae. Rome, 1901. For sale by Giacomo Boni. 177 pp.; 192 figs. and plans. 4to. 10 fr. — **R. Roselli**, *Il carmen fratrum Arvalium*. Acireale, 1901. 19 pp. 8vo.
- F. Sabatini**, *L' incendio di Roma ai tempi di Nerone nella leggenda e nella storia*. Rome, 1901. 39 pp. 8vo. — **Cam. Sapienza**, *Nomina italica* (Ducetius; Acris; Segesta; mitologia sicula, gli Elimi ed il mito di Polixeno). Ragusa, 1901. 43 pp. 8vo. — **O. v. Sarwey**, *E. Fabricius, F. Hettner, Der Obergermanisch-raetische Limes des Roemerreiches*. Im Auftrage der Reichs-Limeskommis-

- sion hsrsg. Heidelberg, 1900, O. Petters. 4to. — Liefg. XI. No. 36. Das Kastell Wörth. (Conrady.) 21 pp.; 2 pls.; 3 figs. No. 37. Das Kastell Trennfurt. (Conrady.) 14 pp.; 1 pl. No. 51. Das Kastell bei Schlossau. (K. Schumacher.) 9 pp.; 3 pls.; 2 figs. — Liefg. XII. No. 2 a. Das Kastell Niederberg bei Ehrenbreitstein. (Dahm.) 21 pp.; 8 pls.; 1 fig. No. 3. Das Kastell Arzbach. (Dahm.) 8 pp.; 3 pls.; 2 figs. — Liefg. XIII. No. 25. Die Erdbefestigungen von Heldenbergen. (G. Wolff.) 22 pp.; 3 pls.; Kastell am Vicus bei Wimpfen. (K. Schumacher.) 13 pp.; 5 pls.; 2 figs. No. 66 b. Das Kastell Heidenheim. (Prescher.) 11 pp.; 3 pls.; 3 figs. — O. Ed. Schmidt, Arpinum, eine topographischhistorische Skizze. Programme, Meissen, 1900. 32 pp. 4to. — E. Seyler, Terrä limitaneä in Fortsetzung von "Agrarien u. Exkubien," eine zweite Untersuchung über römisches Heerwesen. Munich, 1901, privately printed. 82 pp.; 1 pl. 8vo. — G. Showerman, The Great Mother of the Gods. Madison, Wisconsin, 1901. 333 pp.; 4 pls.; 2 figs. 8vo. — A. Sogliano, Studi di topographia storica e di storia antica della regione sotterrata dal Vesuvio nel 79. [From: Rendiconto dell' Accademia di Napoli.] Naples, 1901. 45 pp. 8vo. — G. Speranza, Antichità picene. Teramo, 1901. 35 pp.; 8vo. [From: Rivista Abbruzzese, 1901, fasc. I, III, IV, VI.] — R. Stegmann, Zur Lage des Kastells Aliso. Detmold, 1901, H. Hinrichs. 15 pp. 8vo.
- T. Tibaldi, La regione d' Aosta attraverso i secoli. Parte I (evo antico). Turin, 1900. 408 pp. 8vo.
- Ev. Vercelli, Fas, ius e mos negli autori rustici latini, deduzioni storiche sulla condizione morale e giuridica delle persone nei fondi rustici. Turin, 1901. 88 pp. 8vo. — F. Vivanet, Sesta settimana ed ottava relazione a S. E. il Ministro della pubblica istruzione dell' ufficio regionale per la conservazione dei monumenti della Sardegna. Cagliari, 1901. 66 pp. 8vo. — W. Vollbrecht, Das Säkularfest des Augustus. (Gymnasialbibliothek Heft 33.) Gütersloh, 1901, Bertelsmann. 8vo.
- A. Warsberg, Von Palermo zur Scylla u. Charybdis. Aus dem Nachlasse. Vienna, 1901, Konegen. 124 pp.; 45 figs.; 1 map. 8vo. — H. Willers, Die römischen Bronzezierer von Hemmoor. Nebst einem Anhang über die römischen Silberbarren aus Dierstorf. Mit 82 Abb. im Text und Lichtdrucktafeln. Hanover and Leipzig, 1901, Hahnische Buchhdlg. vi, 251 pp. 4to. — E. Wuescher-Becchi, L' inverno nella Roma imperiale. Rome, 1901. 9 pp. 8vo. [From: Rivista politica e litteraria. Febr. 1901.]
- ## II. ROMAN ARCHITECTURE
- F. Barnabei, La Villa Pompeiana di P. Fannio Sinistore scoperta presso Boscoreale. Relazione a S. E. il Ministro dell' Istruzione Pubblica. Rome, 1901, tip. della R. Accademia dei Lincei. 86 pp.; 11 pls.; 19 figs. 4to.
- R. Cagnat and P. Gauckler, Les monuments historiques de la Tunisie. I. partie: Les monuments antiques (les temples païens). Paris, 1900, Leroux. x, 167 pp.; grav. et pl. 4to.
- E. Ferrero, L'arc d'Auguste à Suse, publié sous les auspices de la Société d'archéologie et des beaux-arts pour la province de Turin, 19 planches d'après les photographies de Secondo Pia et 17 figures dans le texte. Turin, 1901, Bocca frères. vi, 39 pp. Folio.
- P. Gauckler, see Cagnat. — F. Grossi-Gondi, Il tempio di Castore e Polluce sull' acropoli di Tuscolo. Rome, 1901. 21 pp. 8vo. — Le ville Tuscolane nell' epoca classica e dopo il rinascimento. La villa dei Quintilii e la villa di Mondragone. Rome, 1901. 318 pp.; 2 pls. 8vo.
- A. Monaci, I Suevi e l' arco di Vero (from: *Cosmos Catholicus*, anno III, n. 4, Rome, febr. 1901. pp. 103-106). — V. Mortet, La Mesure des colonnes à la fin de l'époque romaine, d'après un très ancien formulaire. 2e éd. revue. Paris, 1900, Picard et fils. 48 pp. 8vo.
- G. Nispi-Landi, Marco Agrippa e il Pantheon. 4 ed. Rome, 1901. 140 pp.; 3 pls. 8vo.
- J. Prestel, Des Marcus Vitruvius Pollio Basilika zu Fanum Fortunae. (Zur Kunstgeschichte des Auslandes. Heft IV.) Strassburg, 1901, J. H. E. Heitz. 57 pp.; 7 pls. 4to.
- C. Weichhardt, Le palais de Tibère et autres édifices romains de Capri. Traduit par J. A. Simon. Leipzig, 1901, K. J. Koehler. vi, 123 pp. 4to. Illustrated.

III. ROMAN SCULPTURE

- P. Bieńkowski**, De simulacris barbararum gentium apud Romanos. Corporis Barbarorum prodromus. Adiuvante Academia litterarum Cracoviensi editid P. B. Cracoviae, apud Gebethner & soc., MCM. 99 pp.; 99 figs. 4to.
- C. Cichorius**, Die Reliefs der Traianssäule. 3. Textband: Commentar zu den Reliefs des zweiten dakischen Krieges. 409 pp.; 19 figs.; 1 map. 8vo. 2. Tafelband: Die Reliefs des zweiten dakischen Krieges. Pls. lviii-cxiii. Berlin, 1900, G. Reimer. Folio.

IV. ROMAN, Etc., VASES AND PAINTING

- E. Bergamini**. Note archeologiche. (Nuova interpretazione d'una scena sepolcrale etrusca; i canopi chiusini sono prodotto etrusco?; intorno alle tazze fenicie.) Melfi, 1901. 16 pp. 8vo.
- T. Venturini Pàpari**, La pittura ad encausto e l'arte degli stucchi al tempo di Augusto. Rome, 1901. 45 pp. 8vo.

V. ROMAN INSCRIPTIONS

- G. Fregni**, Delle due iscrizioni poste nella fronte del Pantheon a Roma. Modena, 1901. 52 pp. 8vo.
- G. Montano**, Brevi note su poche iscrizioni antiche [in Lavello e suo territorio]. Potenza, 1900. 25 pp. 8vo.
- A. Negrioli**, Dei doni militari presso i Romani. Ricerche epigrafiche. Bologna, 1900. 30 pp. 8vo. — **Homer Curtis Newton**, The Epigraphical Evidence for the Reigns of Vespasian and Titus. (Cornell Studies in Classical Philology, XVI.) Ithaca and New York, 1901, The Macmillan Co. viii, 140 pp. 8vo. \$0.80.
- E. Seletti**, Marmi scritti del museo archeologico di Milano. Milan, 1901. 348 pp. 4to.
- J. Tanfani**, Ricerche Storiche epigrafiche sulla costituzione del Senato municipale romano. Taranto, 1900. 72 pp. 8vo.

VI. ROMAN COINS

- G. Tropea**, Numismatica di Lipara. Messina, 1901. 35 pp.; 4 pls. 8vo.

CHRISTIAN ART

I. GENERAL AND MISCELLANEOUS

- Bau und Kunstdenkmäler im Regierungs-Bezirk Cassel**. I Band: Bickell, Kreis Gelnhausen. Marburg, 1901, Elwert. xi, 208 pp.; 350 pls. 4to.
- A. de Baudot and A. Perrault-Dabot**, Archives de la Commission des Monuments historiques. T. II. Normandie, Bretagne, Anjou, Poitou (15 pp.; 100 pls.). T. III. Champagne, Lorraine, Bourgogne, Franche-Comté, Nivernais, Orléanais, et Touraine. 15 pp.; 100 pls. Paris, Laurens. 4to. — **E. Bayard**, La Caricature et les Caricaturistes. Paris, Delagrave. 399 pp. 4to. — **S. Beissel**, Bilder aus der Geschichte der altchristlichen Kunst und Liturgie in Italien. Freiburg in B., Herder. xi, 334 pp.; 200 figs. 8vo. — **La Belgique pittoresque et monumentale**. Album photographique de 250 vues. Brussels, 1900, Rubens. — **L'Art en Belgique**, Choix des principaux monuments de l'Art en Belgique.

- **B. Berenson**, The Study and Criticism of Italian Art. London, 1901, Bell & Co. xiv, 152 pp. 8vo. \$2.65. — **Berliner Photographische Gesellschaft**, Die Meisterwerke der National Gallery in London. 100 pls. Folio. — **K. Berling**, Dresden Porcelain and Its History. London, 1901, Sotheman. Folio. \$40.00. — **W. de Bock**, Matériaux pour servir à l'archéologie de l'Égypte chrétienne. Éd. posthume. St. Petersburg, 1901. 2 vols. 94 pp.; 33 pls.; 100 figs. 4to. \$5.00. [Russian.] — **W. Bode**, Die Gemäldegalerie des Herrn Rudolf Kann in Paris. Vienne, Ges. f. vervielfaelt. Kunst. 33 pp. 4to. 100 pls. Folio. — **X. de Bonnault d'Houet**, R. de Guyencourt and Ch. Duhamel-Decéjean. La Picardie historique et monumentale. Arrondissement de Montdidier. Paris, Picard. 80 pp. illustrated. 4to. — **L'Abbé Bouillet**, L'Art religieux à l'exposition rétrospective du Petit Palais en 1900. Paris, 1901, Picard. Many plates. 8vo. 4 fr. — **E. Bruylant**, La Bel-

- gique illustrée, ses monuments, ses paysages et ses œuvres d'art. Brussels, 1900. 3 vols. 4to. \$20.00.
- P. Clemen**, Die Kunstdenkmäler der Rheinprovinz. IV Band, 4 Abth.: Die Denkmäler des Kreises Esskirchen. Düsseldorf, 1901, Schwann. vii, 265 pp.; 14 pl.; 120 figs. 8vo. — **L. Cloquet**, Traité d'architecture. Tome V. Esthétique, composition et décoration. Paris and Liège, 1901, Ch. Béranger. viii, 618 pp.; 880 figs. 8vo. — **A. Colosanti**, Le stagioni nell' antichità e nell' arte christiana. Rome, 1901, Soc. ed. Dante Alighieri. 23 pp. 4to.
- E. Desormes and A. Basile**, Poly-léxique. Dictionnaire des arts graphiques. Paris, 77 rue Denfert-Rochereau. 2 vols. 415, 383 pp. 18mo. — **C. Diehl**, En Méditerranée. Promenades d'histoire et d'art (Spalato et Salone, En Bosnie-Herzégovine, Delphes, l'Athos, Constantinople, Chypre et Rhodes, Jérusalem). Paris, 1901, Colin. 286 pp. 16mo. — **F. Dignonnet**, Notice historique sur le musée Calvet, d'Avignon. Avignon, 1900. 161 pp. 8vo. — **E. von Dobschütz**, Christusbilder. Untersuchungen zur Christlichen Legende, II^e Hälfte. Leipzig, 1900, Hinrichs. xii, 357 pp. 8vo.
- L. de Farcy**, La Broderie du XI^e Siècle jusqu'à nos jours, d'après des spécimens authentiques et d'anciens inventaires (Supplément). Angers, Josselin-Belhomme. pp. 139-148; pl. 94. Folio. — **R. Forrer**, Geschichte der europäischen Fliesenkeramik vom Mittelalter bis zum Jahre 1900. Strassburg, 1901. — **A. Foucher**, Étude sur l'iconographie bouddhique dans l'Inde d'après des documents nouveaux. Paris, Leroux. iii, 272 pp.; 10 pls.; 30 figs. 8vo. — **T. v. Frimmel**, Galeriestudien. 1 Bd. 6 Lfg. Die Galerie in der Akademie der bildenden Künste zu Wien. Berlin, 1901, Meyer. vii, 230 pp. 8vo. \$2.00.
- Girardon**, Cours élémentaire de perspective linéaire à l'usage des Écoles des beaux-arts, de dessin, des artistes, architectes, etc. Paris, Laurens. iii, 128 pp.; 28 pls. 8vo. — **L. Gonse**, Les Chefs-d'œuvre des Musées de France: La Peinture. Paris, 1900, L. H. May. 30 pls.; 270 illustrations in the text. 4to. \$10.00. — **G. M. Graziani**, L'Arte a città di Castello. Florence, 1901, L. S. Olschki. 400 pp.; 89 pls.; 163 figs. Atlas of 63 pls. 4to. \$100.00. — **H. Grisar**, Geschichte Roms u. der Päpste im Mittelalter. 1. Bd.: Rom beim Ausgang der antiken Welt. Mit 228 historischen Abb. u. Plänen, darunter 1 Plan, Forma Urbis Romae aevi christiani saec. IV-VII, in Farbendruck. Freiburg i. Br., 1901, Herder. xx, 855 pp. **Hayashi**, Histoire de l'art du Japon. Paris, 1900. Folio. — **Henri Hymans**, Les Villes d'art célèbres. Bruges et Ypres. Laurens, with 116 figs. 4to. 3.50 fr.
- J. P. Kirsch**, Die Lehre von der Gemeinschaft der Heiligen im christlichen Alterthum. Kirchheim, 1900. — **F. X. Kraus**, Geschichte der christlichen Kunst. 2. Bd., 2. Abth., 1. Hälfte. Freiburg i. B., 1900, Herder. 282 pp.; 8 pls.; 132 figs. — **A. Kuhn**, Allgemeine Kunstgeschichte. Lfg. 25-27. Einsiedeln, 1901. 8vo. \$0.50 each.
- S. P. Lambros**, Catalogue of the Greek Mss. on Mount Athos. Cambridge, 1900, University Press. x, 597 pp. 4to. \$5.25. — **G. de Lescluze**, Les Secrets du coloris révélés par l'Étude du Spectre. Roulers, 1900, de Meester. 200 pp. 8vo. — **C. A. Levi**, Le collezioni veneziane d'arte e d' antichità dal secolo XIV ai giorni nostri. Venezia, 1900. 2 vols. cclxx, 70 and 293 pp. 8vo. — **W. Lowrie**, Monuments of the Early Church. New York, 1901, The Macmillan Co. xxii, 432 pp.; 182 figs. 8vo. \$1.25. — **W. Lütke**, Untersuchungen zu den Miniaturen der Wiener Genesis. Dissertation. Greifswald, 1897. 52 pp. — **G. B. Lugari**, Il Gianicolo luogo della crocefissione di S. Pietro. Rome, 1900. 57 pp. 8vo.
- C. Maes**, Il primo trofeo della croce eretta da Costantino il Grande nel Foro Romano, ossia la VI e la VII delle colonne onorarie del Foro. Rome, 1901. xvi, 64 pp. 8vo. — **G. Menasci**, Gli Angeli nell' Arte. Florence, 1901, Alinari. 160 pp.; 15 pls.; 80 figs. 8vo. \$2.00. — **E. Molinier**, Histoire générale des Arts appliqués à l'industrie du Ve à la fin du XVIII^e siècle. T. IV: Orfèvrerie religieuse et civile. Paris, Libr. Centrale des Beaux Arts.

- 298 pp.; 21 pls.; figs. 4to. — **C. Mommert**, *Golgotha und das hl. Grab zu Jerusalem*. Leipzig, 1900, Haberlandt. iv, 280 pp. 8vo. — **Eugène Müntz**, *Florence et la Toscane*. Nouvelle édition, entièrement refondue. Paris, 1901, Hachette. vi, 444 pp.; 300 figs. 8vo.
- Die **National Galerie** in London. Vlämische, deutsche und holländische Schule. 1-3 Lief. (Each 8 p. and 8 pls.) Haarlem, Kleinmann. Folio.
- O. Pelka**, *Altchristliche Ehedenkmäler*. (Zur Kunstgeschichte des Auslandes. Heft V.) Strassburg, 1901, J. H. E. Heitz. x, 166 pp.; 4 pls. 4to. — **Gestoso y Pérez**, *Essayo de un Diccionario de los artifices que florecieron en Sevilla desde el siglo XIII al XVIII inclusive*. T. I: A-O. Sevilla, Oficina de la Andalucia Moderna. lxxx, 412 pp. 8vo. — **G. Pietrancellara**, *Manuale araldico per la lettura del blasonario generale italiano*. Rome, 1901, Modes e Mendel. 64 pp. 16mo. — **N. Pokrowski**, *Outlines of Monuments of Christian Iconography and Art*, 2d ed. St. Petersburg, 1900. [Russian.] — **E. J. Pythian**, *History of Art in the British Isles*. New York, 1901, Mansfield & Co. 216 pp. 8vo. \$1.00.
- P. Renouard**, *Documents sur les imprimeurs, libraires, cartiers, graveurs, fondeurs de lettres, relieurs, doreurs de livres, faiseurs de fermoirs, enlumineurs, parcheminiers et papetiers ayant exercé à Paris de 1450 à 1600, recueillis aux Archives Nationales et au département des manuscrits de la Bibliothèque Nationale*. Paris, 1901, Champion. xi, 368 pp. 8vo. — **C. Ricci**, *Ravenna*. Bergamo, 1901. 4to. — **L. Richter**, *Siena*. Leipzig, 1901, E. A. Seemann. 188 pp.; 152 figs. 8vo.
- A. Schmarsow**, *Beiträge zur Aesthetik der bildenden Künste*. III. Plastik, Malerei und Reliefkunst in ihrem gegenseitigen Verhältniss. Leipzig, Hirzel. vii, 232 pp. 8vo. — **E. Seletti**, *Marmi scritti del museo archeologico di Milano*. Milan, 1901, Tonfalonieri. 348 pp. 4to. — **R. Sturgis**, *A Dictionary of Architecture and Building*. Biographical, historical, and descriptive. In three volumes. Vol. I, A-E. Vol. II, F-N. Vol. III, O-Z. New York, 1901, The Macmillan Co. \$18.00.
- A. Venturi**, *Storia dell' arte Italiana*. Vol. I: *Dai primordi dell' arte cristiana al tempo di Giustiniano*. Milan, 1901, Hoepli. xvi, 558 pp.; 462 figs. 8vo. 16 fr.
- A. de Waal**, *Der Sarkophag des Junius Bassus in den Grotten von St. Peter*. Rome, 1900. 94 pp.; 13 pls.; 13 figs. 4to. — **J. B. L. Warren**, *A Guide to the Study of Book Plates*. London, 1901, Simpkin. 236 pp. 8vo. — **A. Whitman**, *The Print-Collector's Handbook*. New York, 1901, The Macmillan Co. 8vo. \$5.00. — **F. Wieland**, *Ein Ausflug ins altehrstliche Afrika*. Stuttgart and Vienna, 1900. 195 pp. 8vo. — **C. Wolff**, *Die Kunstdenkmäler der Provinz Hannover*. II, Regierungs-Bezirk Hildesheim. 1-2 Lfg. Stadt Goslar. Hanover, 1901. xvi, 416 pp.; 16 pls.; 348 figs. 8vo. \$3.00.
- N. Young**, *The Story of Rome*. Illustrated by N. Erichsen. (Mediaeval Towns.) London, 1901, J. M. Dent & Co. xi, 403 pp.; 1 pl.; 47 figs.; 4 plans. 8vo.

II. BYZANTINE AND MEDIAEVAL

- D. Ainalow**, *The Hellenistic Foundations of Byzantine Art*. Studies in Early Byzantine Art. St. Petersburg, 1901. With 4 pls. and 48 figs. 8vo. [Russian.] — **J. H. Albanès**, *Gallia Christiana Novissima. Histoire des archevêchés, évêchés et abbayes de France*. Valence, 1900. 4to.
- N. Barnabei**, *Documenti inediti sul Castello di Montalto*. Siena, Nava. 14 pp. 8vo. — **L. Beltrami**, *Il coronamento nella fronte del duomo di Milano in base ad antichi disegni in parte inediti*. Milan, Allegretti. 64 pp.; 3 pls.; figs. 4to. — **R. J. E. Boggis**, *History of St. Augustine's Monastery, Canterbury*. Canterbury, 1901, Gross & Co. 200 pp. 8vo. \$0.75. — **A. Bouillet and L. Servières**, *Sainte Foy, Vierge et Martyre*. Rodez, 1900, Carrère. 780 pp. 4to. \$6.00. — **J. J. Bouressé**, *Abbayes et Monastères de France*. Tours, Mame. 204 pp. 4to. — **L'Abbé Bruné**, *Statues de l'école Dijonnaise dans l'église de Mièges (Jura)*. Lons-le-Saulnier, 1900, De-clume.
- A. Cassarini**, *Castelli, rocche e roccie*

- storiche delle provincie di Bologna, Forlì, Ravenna, Ferrara, Modena, Reggio, Parma, Piacenza, Firenze, Lusignana e Montefeltro. Bologna, 1901, Zamorani e Albertazzi. 64 pp.; figs. 8vo. — **L. Chomton**, Histoire de l'église Saint Bénigne de Dijon. Dijon, 1901, Gobard. 471 pp.; 30 pls. 4to. — **S. Clement**, Bourges et ses monuments. Bourges, 1901, Renaud. 69 pp. 16mo.
- R. Davidsohn**, Forschungen zur Geschichte von Florenz. II Theil: Aus den Stadtbüchern und Urkunden von San Gimignano (13 und 14 Jahrh.). Berlin, Mittler. iv, 352 pp. 8vo. — **G. Dehio** and **G. v. Bezold**, Die Kirchliche Baukunst des Abendlandes. II Bd. 2^{te} Hälfte. 2 Lfg. Stuttgart, 1901. x, 457-623 pp. 8vo. \$1.00. — **Ch. Diehl**, Justinien et la civilisation byzantine. (Monuments de l'art byzantin. Vol. II.) Paris, 1901, Leroux. xl, 695 pp. 8vo. — **G. Durand**, Monographie de l'Eglise Notre Dame, Cathédrale d'Amiens. Vol. I: Histoire et description de l'édifice. Paris, 1901, Picard. 48 pls.; 180 figs. 4to.
- Ch. Errard** and **Al. Gayet**, L'art byzantin d'après les Monuments de l'Italie, de l'Istrie et de la Dalmatie, relevés et dessinés par Ch. E. Texte par Al. G. 1. Venise. La basilique de Saint-Marc. Paris, 1901, L. H. May. xl, 40 pp.; 2 pls.; 4 figs. Folio.
- P. Ferretti**, La Chiesa e il Convento di San Domenico di Fiesole. Florence, 1901, tip. S. Giuseppe. 86 pp.; 50 figs. 8vo. — **A. Ferrioni**, Schede storico-archeologiche intorno al vestibolo tempio di S. Michele Arcangelo in Levizzano-Rangoni. Modena, 1900. 107 pp. 8vo.
- A. Gayet**, Le Costume en Égypte du III^e au XIII^e siècle. Paris, 1901, Leroux. 256 pp. 16mo. — See **Errard**. — **v. d. Ghezn**, La Cathédrale de Saint-Bavon à Gaud. Haarlem, 1901, Kleinmann. 14 pp.; 16 pls. Folio. — **F. Gottlob**, Formenlehre der nord-deutschen Backsteingotik. Leipzig, Baumgärtner. 24 pp.; 65 pls.; 25 figs. Folio. — **H. Grisar**, Analecta Romana. Dissertazioni, testi, monumenti dell'arte riguardanti principalmente la storia di Roma e dei Papi nel medio evo. Vol. I. Rome, 1900, Desclée Lefebvre & Cie. xxi, 703 pp. 4to.
- H. E. Heppe**, Der Dom zu Metz. Metz, 1901, Scriba. iii, 103 pp.; 1 pl. 4to. — **W. H. Hutton**, Constantinople. The Story of the Old Capital of the Empire. Illustrated by S. Cooper. (Mediaeval towns. 7.) London, 1900, J. M. Dent & Co. xvi, 341 pp.; 6 pls.; 1 plan; 42 figs.
- A. M. Latil**, Le Miniature nei rotuli dell'Exultet; Documenti per la storia della miniatura in Italia. Montecassino, 1901. Folio.
- C. Maes**, Basilica PP. Julii Iuxta Forum (S. Maria Antiqua — S. Maria de Inferno — S. Maria Liberatrice) con un'occhiata in dietro a S. Maria trans Tiber. With Appendix. Rome, 1901. 4to. — **H. J. L. J. Masse**, The City of Chartres: its Cathedral and Churches. London, Bell. 120 pp.; 47 figs. 8vo. — The Abbey Church of Tewkesbury. London, G. Bell. 138 pp.; 44 figs. 8vo. — **G. Milanesi**, Nuovi Documenti per la storia dell'arte Toscana dal XII al XV secolo raccolti e annotati da G. Milanesi per servire d'aggiunta all'edizione del Vasari edita da Sansoni nel 1885. Florence, 1901, G. Dotti. 176 pp. 8vo.
- G. Richter**, Die ersten Anfänge der Bau- und Kunstthätigkeit des Klosters Fulda. Fulda. vii, 72 pp. 8vo. — **G. T. Rivoira**, Le Brigini della Architettura Lombarda. 2 vols. Rome, 1901, Loescher. Vol. I: xvi, 372 pp.; 6 pls.; 464 figs. 4to. — **P. A. Robson**, The Cathedral Church of St. David's. (Bell's Cathedral Series.) New York, 1901, The Macmillan Co. vi, 104 pp. 12mo. \$0.60. — **E. Roulin**, L'Ancien Trésor de L'Abbaye de Silos. Paris, 1901, Leroux. xviii, 118 pp.; 16 pls. 4to.
- G. Schlumberger**, L'Épopée byzantine à la fin du XI^e siècle. II^e partie: Basile II le Tueur des Bulgares. Paris, Hachette. vi, 655 pp.; 10 pls. 4to. — **A. Schulten**, Die Mosaikkarte von Madaba und ihr Verhältnis zu den ältesten Karten und Beschreibungen des heiligen Landes. Berlin, 1900, Weidmann. 121 pp.; 1 pl.; 3 maps. 4to. — **R. W. Schultz** and **S. H. Barnstey**, The Monastery of Saint Luke of Stiris in Phocis, and the Dependent Monastery of Saint Nicolas in the Fields, in Boeotia. London and New York, The Macmillan Co. xii, 76 pp.; 61 pls.; 48 figs. 4to. —

A. Siffer, *Le Musée et les ruines de l'Abbaye de Saint-Bavon à Gand*. Ghent, 1900, Siffer. — **E. F. Strange**, *The Cathedral Church of Worcester*. (Bell's Cathedral Series.) New York, 1901, The Macmillan Co. 115 pp. 12mo. \$0.60. — **G. Swarzenski**, *Die Regensburger Buchmalerei des X und XI Jahrhunderts*. Leipzig, 1901, K. W. Hiersemann. 35 pl.; 101 figs. 4to. \$16.00.

III. RENAISSANCE

A. Amersdorffer, *Kritische Studien über das Venezianische Skizzenbuch*. Berlin, 1901, Mayer u. Müller. 71 pp.; 3 pls.; 3 figs. 8vo. — **W. J. Anderson**, *The Architecture of the Renaissance in Italy*. 3d ed. London, 1901, Botsford. 204 pp.; 64 pls.; 98 figs. 8vo. — **L. Beltrami**, *Le Cà del Duca nel Canal Grande ed altre reminiscenze sforzesche in Venezia*. Milan, Alleghretti. 62 pp.; 1 pl. 8vo. — *Storia della facciata di S. Maria del Fiore in Firenze*. Milan, Alleghretti. 65 pp.; 24 figs. 8vo. — **B. Berenson**, *The Study and Criticism of Italian Art*. New York, 1901, Macmillan Co. 152 pp. 8vo. \$3.50. — **E. Berger**, *Beiträge zur Entwicklungsgeschichte der Maltechnik*. IV Folge. *Quellen der Maltechnik während der Renaissance u. der Folgezeit in Italien, Spanien, den Niederlanden, Deutschland, Frankreich und England*. Munich, 1901, Callweg. viii, 454 pp. 8vo. — **Blomfield**, *A Short History of Renaissance Architecture in England, 1500-1800*. New York, 1901, Macmillan Co. xii, 323 pp. 8vo. \$3.00. — **Boyer d'Agen**, *Le Peintre des Borgia*. Pinturicchio, sa vie, son œuvre, son temps (1450-1513). Paris, 1901, Oudin. viii, 550 pp.; 130 figs. 8vo. — **La vita di Benvenuto Cellini**, *Testo critico a cura di Orazio Bacci*. Florence, 1901, Sansoni. — *La vita di Benvenuto Cellini, I trattati, ecc.*, a cura di A. J. Rusconi e A. Valeri. Rome, 1901, Soc. edit. naz. — **L. Cogo**, *Il rilievo architettonico della*

basilica palladiana in Vicenza. Vicenza, 1901, Fabris. 11 pp.; 3 pl. 4to. — **L. Courajod**, *Leçons de Louis Courajod, professées à l'Ecole du Louvre (1887-1896)*. Tome II. *Origines de la Renaissance*. Paris, 1901, Picard. 8vo. 3 vols. for \$6.00. — *Old Cottages and Farmhouses in Kent and Sussex*. London, 1901, Botsford. 100 pls. 8vo. — **M. Crutwell**, *Andrea Mantegna*. London, 1901, Bell & Co. 132 pp.; 40 pls. 8vo.

E. Delignières, *Le petit Sépulcre ou Mise au Tombeau de l'Hospice de S. Valéry-sur-Somme, Bas-relief en pierre, XVI^e siècle*. Paris, 1900, Plon. 11 pp. 8vo. — **Lady Dilke**, *French Furniture and Decoration in the Eighteenth Century*. New York, 1901, Macmillan Co. xix, 260 pp.; 16 pls.; 50 figs. 8vo. \$10.00. — **Dürer und Holbein**, *Gemälde in der Königl. Galerie zu Berlin*. Berlin, Photog. Ges. 11 pls. Folio. \$25.00. — **R. Falb**, see **San Gallo**. — **J. Gaedertz**, *Der Altarschrein v. Hans Memling im Dom zu Lübeck*. Lübeck, 1901, Wöhring. iii, 9 pp.; 15 pls. Folio. \$6.25. — **P. Gélis-Didot**, *La Peinture décorative en France, du XVI^e au XVIII^e siècle*. Paris, Ch. Schmid. viii pp.; 60 pls.; 400 figs. Folio. — **H. von Geymüller**, *Handbuch der Architektur VI. I. Die Baukunst der Renaissance in Frankreich. I. Historische Darstellung der Entwicklung des Baustils*. 332 pp.; 66 figs. II, viii, pp. 333-676; 155 figs. — **P. Heitz** and **W. L. Schreiber**, *Pestblätter des XV Jahrhunderts*. Strassburg, 1901, J. H. Ed. Heitz. 41 pls. Folio. — **W. Heywood**, *The "Examples" of Fra Filippo. A Study of Mediaeval Siena*. Siena, 1901, Enrico Torrini. x, 350 pp.; 10 pl. 8vo. — **Pieter de Hooch** and **Johannes Vermeer**. 1 Lfg. Haarlem, 1901, Kleinmann & Co. 10 pls. Folio. \$3.00. — **E. Jaeschke**, *Die Antike in der bildenden Kunst der Renaissance. I. Die Antike in der Florentiner Malerei des Quattrocento*. Strassburg, Heitz. 62 pp. 8vo. — **C. Justi**, *Michelangelo. Beiträge zur Erklärung der Werke und des Menschen*. Leipzig, Breitkopf u. Haertel. viii, 430 pp.; 4 figs. 8vo. — **Paul Kristeller**, *Andrea Mantegna*.

- Translated by S. A. Strong. New York, 1901, Longmans, Green & Co. xxii, 511 pp.; 26 pls.; 162 figs. 4to. — **F. M. Kurth**, Reigen der Totentänze. Kunsthistorische Darstellung der bedeutendsten Totentänze bzw. Bilder des Todes vom Anfang des 15. Jahrhunderts bis auf unsere Tage unter Berücksichtigung zeitgenössischer Meister. Berlin-Neurahnsdorf, A. Brand. 28 pp. 8vo. — **T. Kutschmann**, Geschichte der deutschen Illustration vom ersten Auftreten des Formschnittes bis auf die Gegenwart. 1 u. 2 Lief. Goslar, Gager. pp. 1-80; 14 pls. 4to.
- Leonardo da Vinci**, Il Codice Atlantico nella Biblioteca Ambrosiana di Milano. Fasc. XXII. Milan, 1901. pp. 901-940; pls. 841-880. Folio. \$9.50. — **F. Lippmann** und **H. de Groot**. Original drawings by Rembrandt. Second series. Two parts, 50 plates in each. Published by M. Nijhoff, The Hague. New York, 1901, Dodd, Mead & Co. \$100.00. — **Lucas de Leyde**, La Passion de Notre Seigneur Jésus Christ, comprenant la reproduction des 14 estampes gravées en 1521. Antwerp, 1901, Lib. néerland. 48 pp. 8vo.
- H. Makowsky**, Verrocchio. Leipzig, 1901, Velhagen u. Klasing. 102 pp.; 80 figs. 8vo. — **A. H. Malan**, More Famous Homes of Great Britain and their Stories. New York, 1900, J. P. Putnam's Sons. xx, 337 pp. — Other Famous Homes of Great Britain and their Stories. New York, 1901, J. P. Putnam's Sons. xxv, 352 pp. — **F. v. Marcuard**, Die Zeichnungen Michelangelos im Museum Tegner zu Haarlem. Munich, 1901, Bruckmann. — **W. Martens**, Johann Gutenberg und die Erfindung der Buchdruckerkunst. Karlsruhe, Lang. 46 pp.; illustrated. 8vo. — **W. Martin**, Het Leven en de Werken van Gerrit Dou. Leyden, 1901, Van Doesburg. xii, 272 pp. 8vo. — **B. Marrai**, Le cantorie di Luca della Robbia e di Donatello, con nuovi documenti e con un disegno della cantoria di Luca recostituita dall'architetto G. Castellucci. Florence, tip. di Minori corrig. 32 pp.; 1 pl. 8vo. — **H. Meisner** und **J. Luther**, Die Erfindung der Buchdruckerkunst. Bielefeld, Velhagen u. Klasing. 116 pp.; 15 pls.; 100 figs. 8vo. — **J. J. Merlo**, Ulrich Zell. Kölns erster Drucker. Köln, Kölner Verl.-Anstalt u. Druck. 76 pp.; 8 pls. 4to. — **O. Merson**, La Peinture française au XVII^e siècle et au XVIII^e. Paris, 1901. \$0.70.
- F. Pasquier**, Tapisseries toulousaines à l'époque de la Renaissance. Paris, 1901. 8vo. — **G. E. Pazaurek**, Franz Anton Reichsgraf von Sporck, ein Mäcen der Barockzeit, und Seine Leiblingsschöpfung Kukus. Leipzig, 1901, K. W. Hiersemann. 32 pp.; 30 pl.; 18 figs. Folio. \$15.00. — **A. Philippi**, Kunstgeschichtliche Einzeldarstellungen. VI Bd. Die Blüte der Malerei in Holland. 1 Buch. Frans Hals, Rembrandt u. ihr Kreis. Leipzig, 1901. Seeman. viii, 240 pp. \$1.25. — **E. M. Philippo**, The Frescoes in the Sixtine Chapel. London, 1901, Murray. 176 pp. 8vo. — **H. R. Plomer**, A Short History of English Printing, 1476-1898. London, Kegan Paul, Trench, Trübner. xv, 330 pp. 8vo. — **S. Püchler**, Martin Schaffner. Strassburg, Heitz. 74 pp.; 11 pls. 8vo.
- W. Rothenstein**, Goya. London, Unicorn Press. 40 pp.; illustrated. 16mo. — **Jacob van Ruisdael**. Haarlem, 1901, Kleinmann. 40 pls. Folio.
- San Gallo** (Giuliano), Il taccuino Senese. 49 Facsimili di disegni d'architettura, scultura ed arte applicata pubblicati da Rodolfo Falb. Siena, 1902. 53 pp.; 49 pls. Folio. — **A. Schütz**, Italienische Architektur-Skizzen (Innenräume). Berlin, 1901, Wasmuth. — **L. Scott**, Filippo di Ser Brunellesco. London, 1901, Bell & Co. xvi, 158 pp.; 41 pls. 8vo. — **J. Springer**, Das radirte Werk des Adrien van Ostade in Nachbildungen. Berlin, 1901, Fischer u. Franke. 8 pp.; 44 pls. 4to. — **Jan Steen**. Haarlem, 1901, Kleinmann. 40 pls. Folio. — **E. Steinmann**, Antonio da Viterbo. Ein Beitrag zur Geschichte der umbrischen Malerschule um die Wende des XV Jahrhunderts. Munich, 1901. vii, 59 pp.; illustrated. Folio. — Die Sixtinische Kapelle. I Band: Bau und Schmuck der Kapelle unter Sixtus IV. Munich, 1901, Bruckmann. 4to. — **J. B. Supino**, L'arte di Benvenuto Cellini, con nuovi documenti sull'oreficeria fiorentina nel secolo XVI. Florence, 1901, Alinari.

- A. Van de Velde**, *De oude Brugsche Bouwtrant en de Vlaamische Renaissance*. Bruges, 1901, H. Van Mul-
lern. — **P. Vitry**, *Michel Colombe et la sculpture française de son temps*. Paris, 1901, Libr. centr.
B. Arts. xxiii, 532 pp.; 16 pls. 8vo.
- H. Wallis**, *The Oriental Influence on the Ceramic Art of the Italian Renaissance*. London, 1900, Quarritch. — **W. Weisbach**, *Francesco Pesellino*. Berlin, 1901, Bruno Cassirer. 140 pp.; 18 pls.; 33 figs. 4to. \$9.00. — **P. Wenz**, *Die Kuppel des Domes Santa Maria del Fiore zu Florenz*. Berlin, 1901, Ebering. 72 pp. 8vo. \$0.50. — **J. C. Williamson**, *Francesco Raibolini (called Francia)*. London, 1901, Bell & Co. xvi, 160 pp.; 42 pls. 16mo. — *Velasquez* (Bell's *Miniature Series of Painters*). New York, 1901, The Macmillan Co. vi, 63 pp. 16mo. \$0.50. — **J. Wolff**, *Leonardo da Vinci als Aesthetiker. Versuch einer Darstellung u. Beurtheilung der Kunsttheorie Leonardos auf Grund seines "Trattato della Pittura."* Ein Beitrag zur Geschichte der Aesthetik. Strassburg, 1901, Heitz. 140 pp. 8vo.
- C. Yriarte**, *Mantegna, Sa vie, sa maison, son tombeau, son œuvre, dans les musées et les collections*. Paris, 1901, Rothschild. 33 pls.; 115 figs. 4to. \$10.00.

American School of Classical Studies in Rome

STUDIES IN THE LIVES OF ROMAN EMPRESSES

AFTER the first century of the Roman Empire, two Empresses — Julia Domna, wife of Septimius Severus and mother of Caracalla, and her niece Julia Mamaea, mother of Alexander Severus — surpassed all others who bore the name Augusta in the dignity of their titles, in the public honor they received, and in the extent to which they participated in the actual administration of the government. This is made evident by isolated statements of contemporary historians¹ and of the biographers of the Emperors.² It is the purpose of these studies to combine the scanty evidence derived from such literary sources with the testimony of coins and inscriptions, in order to determine, if possible, the relation of these women, in point of influence, to their predecessors and to the members of their own families, and to define their position in the Empire.

I. JULIA DOMNA³

According to writers of the *Historiae Augustae*, Marius Maximus told the following story: ⁴ Septimius Severus had lost his first wife, Marcia,⁵ and was considering his second marriage, when he learned that the horoscope of a certain girl in the Orient promised that she should be a king's wife; therefore he

¹ Dion Cassius and Herodian.

² Spartianus, Lampridius, and others.

³ Part II, dealing with the position and influence of Julia Mamaea, will be published in vol. I of the *University of Michigan Studies* (New York, The Macmillan Company, 1902).

⁴ Lampridius, *Alexander Severus*, 5, 4; Spartianus, *Severus*, 3, 9.

⁵ Her name was Paccia Marciana (*C.I.L.* VIII, 19494; cf. Spart. *Sev.* 3, 9).

sought her out and married her, with the purpose of fulfilling the prophecy. Though the story sounds suspiciously like a *vaticinatio post eventum*, it is interesting as evidence of a belief that the influence of this woman, Julia Domna, was essential to her husband's success.

Julia Domna was the daughter of Julius Bassianus, priest of the Sun at Emesa, Syria.¹ Dion Cassius states that she was of low² or plebeian³ rank, but it is not probable that this statement is to be taken literally,⁴ for in Asia the priesthood of the Sun was intimately connected with royalty,⁵ and Julia Domna maintained her relation to the Sun cult after she became Empress.⁶ She had a sister Julia Maesa,⁷ and a kinsman, possibly a brother,⁸ both of whom followed her to Rome. Nothing is known of her early life. She became the wife of Septimius Severus in 187, when he was *legatus pro praetore* at Lyons.⁹ Her first son, Bassianus (Caracalla), was born at Lugudunum within a year after her marriage.¹⁰ Her second son, Geta, was born in 189, in Rome, during the first consulate of Severus.¹¹ During some time following the consulate, she with her family remained at

¹ Victor, *Epitome*, 21.

² Dion Cassius, *Excerpta Vaticana*, Mai, 74.

³ Dion Cassius, LXVIII, 24.

⁴ Lampridius calls her "nobilem orientis mulierem" (*Alex.* 5, 4).

⁵ See coins of the Arsacidae; Eckhel, *Doctrina Numorum Veterum*, VI, pp. 360 ff. It may not be a mere coincidence that Julia Domna's niece Soaemias bore a name which had belonged to royalty at Emesa: "Soemus, King of Emesa" (Josephus, *Ant. Jud.* XX, 84, etc.). An Arsacid Soaemus is mentioned by Photius (*Dramaticon*, 94, 241, R.).

⁶ Caracalla made Emesa a colony. See Preller, *Röm. Myth.* II, p. 400.

⁷ Herodian, *Historiae*, V, 3, 2.

⁸ The name Julius Gessius Bassianus occurs in contemporary Arval inscriptions (*C.I.L.* VI, 2086).

⁹ Spartianus, *Sev.* 3, 9. Dion Cassius, who represents Julia Domna as bride of Severus before the death of Faustina, 175 A.D. (*Historiae*, LXXIV, 3), seems never to have heard of Marciana, to whom Severus was married when he was *tribunus plebis* (Spartianus, *Sev.* 3, 1-2). Severus did not mention her name in his autobiography (*ibid.*), the source from which Dion probably drew the account of the portents accompanying his marriage in 175 and foretelling his *imperium*.

¹⁰ Spartianus, *Sev.* 3, 9; 10, 3. He died aged twenty-nine, April 8, 217 A.D. (Dion Cassius, LXXVIII, 6).

¹¹ Victor, *Epitome*, 21, 1; Spartianus, *Sev.* 4, 2. He died aged twenty-two, February, 212 (Dion Cassius, LXXVII, 2).

Rome, living very simply at first, and later with somewhat more pretension, after their removal to an estate purchased by Severus¹ shortly before he became *legatus pro praetore* of Pannonia, in 191. Their private life was interrupted by the departure of Severus for Pannonia, but there is nothing to indicate where or how Julia Domna spent the two years following. It seems probable that she was absent from the city when her husband was proclaimed a public enemy because his army had hailed him Emperor,² and that she did not return until he had completed his victorious march toward Rome.

No doubt Julia Domna and her sons had some part in the conqueror's entrance into the city — "the most glorious spectacle," Dion says, "that I have ever witnessed."³ In celebration of this triumphal entry, coins were struck in honor of the conqueror's wife, with the name IVLIA DOMNA and the legends BONA SPES and BONI EVENTUS,⁴ expressing the promise of the Emperor to govern well and to satisfy the expectation of all. The imperial name Augusta was given to her during this first year, and is found on all of her inscriptions and on all of her coins except those just mentioned.

Very little can be learned of Julia Domna's life during the four years which Severus spent in crushing his rivals and in establishing himself in the Empire. According to the biographer of Albinus she showed herself even more ambitious than Severus, for, dissatisfied with the compromise because of which Albinus was acknowledged as Caesar,⁵ she urged her husband to strike for the undisputed possession of the Empire.⁶ She must have accompanied Severus to Syria on his expedition against Niger, as she seems for a time to have had in her family the children of the latter.⁷

After the final defeat of Niger, and the victories over the

¹ Spartianus, *Sev.* 4, 5-6.

² Dion Cassius, LXXIII, 16.

³ *Ibid.* LXXIV, 1.

⁴ Cohen, *Médailles Imperiales*, IV, 'Julia Domna,' n. 8-10; cf. coins of Severus with the same legend, of the date of 193 (*ibid.* 'Severus,' n. 56, 65-66).

⁵ Capitolinus, *Albinus*, 1, 2. Herodian, II, 15, 3.

⁶ Capitolinus, *Albinus*, 3, 4-5.

⁷ Spartianus, *Sev.* 8, 11.

Adiabeni and the Arabs, the earliest dated inscription in Julia Domna's honor was dedicated in 195 A.D., at Palermo, together with inscriptions in honor of Severus and Caracalla. These recognize Caracalla as Caesar, and Julia Domna as one of the founders of a new dynasty (*C.I.L.* X, 7272):

IVLIAE AVG
IMP · CAES · L · SEPTI
MI · SEVERI · PERTNA
CIS · AVG · PII · PARTHI ·
CI · ARABICI · ET · PAR
THICI ADIABENI
CI · P · M · TR POT III
IMP V COS · II · P · P ·
RES · PVBL · PANHORMI
TANORVM

Within the year following, in recognition of her presence in her husband's campaigns, she was given the title *Mater Castorum*, which is found first on bases dedicated in 196 at Narbo and at Ostia.¹ The inscription from Narbo is as follows (*C.I.L.* XII, 4345):

IVLIAE DOM
NAE AVGVSTAE
IMP · CAES · L · SEP
TIMI SEVERI PII PER
TINACIS AVG ARA
BICI ADIABENICI
P · P · P · M · TRIB POT IIII IMP VIII COS II ET
M AVRELI ANTONI
NI CAES MATRI
ITEMQVE CASTRORVM
DECVMAN NARB

As the title *Mater Castorum*² appears for the first time in the year 196, it seems probable that Julia Domna received it in honor

¹ *C.I.L.* XIV, 120.

² Faustina, the first Empress to be called *Mater Castorum*, was given the title to correspond with the seventh salutation of Marcus Aurelius as *imperator*,

of the victories over the Adiabeni, which were, in 195, the occasion of the sixth and seventh salutation of Severus as *imperator*.¹ On bronze coins that represent the Empress as *Mater Castrorum*, or patron of the army, she is portrayed veiled, sometimes wearing a diadem, and either sacrificing before an altar, or seated holding a phoenix poised on a globe or a sceptre; in both designs appear military standards.²

There is nothing to indicate where Julia Domna passed the time occupied by Severus in the campaign which ended in the defeat and death of Albinus in February, 197, at Lugudunum.³ Several inscriptions, naming her "Mother of Caesar⁴ and of the Camp,⁵" show that Severus was accepted as Emperor in Africa and in the East, while Gallic inscriptions indicate that Albinus had still a following in that part of the Empire.

The people of Lugudunum were soon reconciled to their new master; for as in 194 a *taurobolium* had been offered for Severus and Albinus Caesar and the "divine house," so three months after the victory the same offering was made for Severus and his family.⁶ The record is as follows (Wilmanns, *Exempla*, 122):

[*pro sal*] VTE · IMP · L · SEPTIMI
[*Severi*] PII PERTINACIS AVG
ET · M · AVRELI ANTONINI CAES

after a victory over the Quadi, and because she accompanied the Emperor on military expeditions (Dion Cassius, LXXI, 10. Capitolinus, *Marcus*, 25, 8; cf. Mommsen, *Staatsrecht*, II, 795. Herzog, *Gesch. und System*, II, p. 799. Schiller, *Röm. Kais.* I, 741).

¹ Wirth, *Quaestiones Severianae*, p. 25. Dion Cassius, LXXV, 1-4.

² Cohen, IV, pp. 115-116. Both designs are found on coins of Faustina the younger, the latter, however, only on those struck after her deification. One design — "ears of wheat" — on Julia Domna's coins, with the legend *MATER CASTRORVM*, has no apparent connection with the title.

³ Spartianus, *Sev.* 11, 7; Capitolinus, *Albinus*, 9; Dion Cassius, LXXV, 6 ff.; Herodian, III, 7.

⁴ Severus had named his son Bassianus "Antoninus Caesar" (Spartianus, *Sev.* 10, 3). He is called Antoninus (never Bassianus) on inscriptions from 195 A.D.

⁵ *C.I.L.* III, 154, 304; VIII, 9032, 9033, by priests or municipalities. *C.I.G. Sept.* 1845-1846; cf. 1844 to Antoninus Caesar.

⁶ Boissieu, *Inscript. Lyon.* p. 29.

IMP DESTINATI ET
 IVLIAE AVG MATRIS CASTROR
 TOTIVSQVE DOMVS·DIVINAE
 EORVM·ET·STATV·C·C·C·AVG·LVG·
 [t]AVROBOLIVM·FECERVNT
 SEPTICIA VALERIANA ET OPTATIA·SPORA EX VOTO
 PRAEEVNTE AELIO ANTHO SA
 CERDOTE SACERDOTIA AEMI
 LIA SECYNDILLA TIBICINE FL
 RESTITVTO APPARITORE VIREI
 O HERMETIONE
 INCHOATVM EST SACRVM IIII
 NONAS·MAIAS·CONSVMMMA
 TVM NONIS EISDEM
 T·SEXTIO LATERANO·L·CVSPIO
 RVFINO COS
 LDDD.

In the year 197, dedications were made to Julia Domna as mother of the heir apparent to the Empire (*imperator destinatus*) and wife of the Emperor, each with a full enumeration of the titles of her husband and son. Two of these were found in Numidia;¹ one, at Trebula Mutuesca,² in Italy. But more important than these as an indication of Julia Domna's actual rank in the Empire is a milestone from Lagina, in Caria, of the year 197, the oldest existing milestone that is inscribed with the name of an Emperor's wife. Severus now laid claim to the Empire as his personal property, and therefore marked public monuments as private possessions,³ admitting his wife and his son also as co-proprietors. The inscription is written in both Greek and Latin (*C.I.L.* III, 482, ll. 1-6):

¹ *C.I.L.* VIII, 5699, 6702.

² *Ibid.* IX, 4880.

³ Hirschfeld (*Untersuchungen*, pp. 173-174, n. 2) quotes Jordan, *Forma Urbis*, "Ita Romam a se multifariam instauratam urbem suam Severus et Antoninus vocaverunt, itaque non populi Romani sed domus imperatoris principisque quasi praedium habita est."

IMP·CAESAR [L] SEPTIMIVS SEVERVS PIVS PER
 TINAX AVG·PONTIFEX MAXIMVS TRIBVNI
 CIAE POTESTATIS [iii p p] COS II ET IMP·CAES
 M·AVR·ANTONINVS PIVS AVG·PONTIFEX
 MAX ~~XXXXXXXXXXXXXXXXXXXX~~
 ET IVL·DOMNA AVG MATER CA[s]TRO
 RVM

A few months after the battle of Lugudunum, Julia Domna was in Asia with Severus,¹ who spent more than a year in settling affairs on the eastern frontier of the Empire and in reducing to obedience all who had not accepted him as Emperor;² and after peace was established, it is probable that she accompanied him on his visit to Egypt.

From this year, 197, many inscriptions were made in honor of Julia Domna, not only as wife of Severus and *Mater Castorum*, but also as mother of an Emperor and of a Caesar; for as a result of the victory of Lugudunum, Caracalla was proclaimed Augustus, and Geta, Caesar.³ As the Empire was now in a state of comparative tranquillity, attention was everywhere turned to repairing the damage resulting from the civil wars. Buildings were erected in all the provinces, and dedicated to members of the imperial house. Because Severus was an African, the African towns and cities were especially active in this sort of adulation. The largest number of dedications to Julia Domna is found in Numidia, at Lambaesis, the permanent camp of the legio III Augusta, to which Severus had given the name *pia vindex*. Here the associations formed by soldiers and officers adopted as patrons members of the imperial family,⁴ and set up their statues in the regular places of meeting, which were dedicated "to the prosperity of Severus, Julia, and their sons."⁵

¹ Cf. Schiller, *Röm. Kais.* II, p. 719.

² Spartianus, *Sev.* 12-15; Herodian, III, 8-9; Dion Cassius, LXXV, 9.

³ Spartianus, *Sev.* 16, 2, and *Geta*, 5, 3.

⁴ Waltzung, *Étude Historique sur les Corporations Professionnelles chez les Romains*, pp. 219, 227.

⁵ *C.I.L.* VIII, 2550-2553, 2558-2559, 2549, 18702, 18253-18255.

There were dedicated, also, special offerings to the "Genius of Lambaesis" and the "Genius of Legio III Augusta Pia Vindex," for the prosperity of Severus, Julia Domna, and their children. A single inscription gives the general form of all (*C.I.L.* VIII, 2527):

GENIO · LEG III AVG P V
 PRO SALVTE
 IMPP CAES · L SEPTIMI SEVERI PII PERTINACIS
 AVG · ET · M AVRELI AN
 TONINI AVG · FELICIS
 PAR · BRIT · GER · MAX · AVG¹
 ET IVLIAE AVGVSTAE
 MATRIS AVGVSTI N
 ET CASTROR · DEDICANT
 Q ANICIO FAVSTO LEG
 AVGG · PR PR C · V · COS DES
 T ARRANIVS DATVS
 SIGNIFER ·
 EX · IS III MIL · N · DE SVO
 POSVIT

Inscriptions of 198 A.D., at Tucci,² Spain, and Thagaste,³ Numidia, are dedications to Julia Domna as wife of the "restorer of peace." At about the same time a building⁴ was dedicated at Thamugas to the whole imperial family; and a basis,⁵ "to Antoninus Augustus, son of Severus Augustus and of Julia Augusta." More important than these, because placed upon a public work erected by a city, is an inscription from a bridge over the river Chabina (Bolam Su), between Cappadocia and Commagene. This bridge was rebuilt, 200 A.D., by Severus and his sons, and on each of four columns, placed at its four corners, the "four cities of Com-

¹ Titles of Caracalla substituted for Geta's name.

² *C.I.L.* II, 1668; Severus is called *Restitutor pacis publicae* in the companion inscriptions, *C.I.L.* II, 1669, 1670, 2124.

³ *C.I.L.* VIII, 17214.

⁴ *Ibid.* VIII, 2437-2438.

⁵ *Ibid.* VIII, 17871.

magene" erected a portrait of a member of the imperial family.¹ The inscription to Julia Domna is as follows (*C.I.L.* III. 6714):

IVL · DOMNAM
AVG · MATREM
KA[*str*]O[*r*]VM
QVAT · CIVITAT · COMMAG

A Greek inscription, dedicated at Memphis at about the same time, has reference to the travels of Severus in Egypt,² while he was engaged in the war in the East. It records the laying of a pavement "for the perpetual victory and preservation of our lords the Emperors Septimius Severus and Marcus Aurelius Antoninus and of Julia Domna Augusta, Mother of the Camp."³ An allusion to the same journey⁴ is found at Rome in the inscription of an altar to Liber, dedicated for the "prosperity and victories" of the whole imperial family, and recording the erection of a shrine of Liber and the dedication of a "little garden" to the nymphs in a place "called Memphi."⁵

Further reference to the Oriental wars of Severus is made by inscriptions from Ostia and Florence. A statue of Nemesis, erected in the temple of Serapis at Ostia by T. Valerius Sere-nus, a *neocoros* of Serapis, who held an office connected with the supply of grain, was dedicated, "for the prosperity, return, and immortality of our lords, the Emperors, Severus and Antoninus and of Julia Augusta, and for a fair voyage for the whole expedition."⁶ The "chief priest of Marcus Aurelius Antoninus, the new Dionysus," dedicated a tablet at Florence "for the prosperity, victory, and immortality of our lords the Emperors Lucius Septimius Severus Pertinax Augustus Arabicus Adia-

¹ *C.I.L.* III, 6714. The column containing Geta's name has disappeared (Henzen, *Bulletino*, 1883, p. 83); an erased inscription on the column bearing Domna's name recorded the name of the Emperor who built the bridge (*Journal of Hell. Stud.* XVIII, p. 315).

² Spartianus, *Sev.* 17, 4.

³ *C.I.G.* 4701, b; the date assigned in the note is 199 A.D.

⁴ Marini, *Atti Arval*, p. 628, cited by Orelli, 2360.

⁵ *C.I.L.* VI, 461.

⁶ *I.G.I.S.* 917.

benicus Parthicus Maximus and of Marcus Aurelius Antoninus Augustus Arabicus Adiabenicus Parthicus Maximus and of Lucius Septimius Geta Caesar, and of Julia Augusta, Mother of the Camp, and of the Holy Senate."¹

While, as inscriptions prove, unusual honor was paid to Julia Domna in all parts of the Empire, her influence and her very life were in danger from an enemy at court. Plautianus, the praetorian prefect, a man who had risen to such distinction in the Empire that he received honors belonging to members of the imperial family,² appears to have been jealous of the Empress. He tried in every way to injure her, and at last persuaded Severus to bring her to trial for adultery,³ a prosecution to which Lampridius probably alludes in his statement that the Empress was tried for treason, since, in accordance with the ruling of the early Empire, adultery in a woman of the imperial family was treason.⁴ The Empress was acquitted, though the prefect had resorted to the extreme expedient of torturing free women⁵ to secure evidence against her.

Her acquittal and the fact that she had proved herself able to repel a direct attack of her enemy made her even more impatient of the prefect's influence over the Emperor, which was quickly regained, and of the choice, in 203 A.D., of Plautilla, daughter of Plautianus, as wife for her son Caracalla.⁶ As under these circumstances court life was distasteful to her, she applied herself to the study of philosophy,⁷ and, no doubt,

¹ *C.I.G.* 6829. This seems to have been dedicated before the year 200, as Severus does not have the triumphal title *Germanicus* which was received in that year (Wirth, *Quaest. Sev.* p. 25).

² Dion Cassius, LXXV, 14. Cf. *C.I.L.* VI, 225-226; *C.I.G.* 5973.

³ Dion Cassius, LXXV, 15.

⁴ Tac. *Ann.* II, 50. Laws relating to adultery and treason became more severe under Severus and Antoninus (*Digest*, XLVIII). Penalties for adultery were determined by the rank of the criminal (*ibid.* XLVIII, 5; XXXVIII, 8). Women could appear in trial for treason (*ibid.* XLVIII, 4, 8).

⁵ Slaves might be tortured in a trial for treason (*Codex Just.* IX, 6, Paulus).

⁶ Dion Cassius, LXXVI, 1. Plautianus is called *necessarius Augg. et comes per omnes expeditiones eorum* (*C.I.L.* VI, 1074), and *necessarius dd. nn. Augg. Severi et Antonini* (*Not. Scav.* 1893, p. 135).

⁷ Dion Cassius, LXXV, 15.

at the same time made use of every opportunity to increase the hatred which Caracalla felt for his wife and her father.¹

Officially, however, this trouble was ignored, except in that the legends of gold and silver coins express more than the conventional desire for harmony between members of the imperial family. Coins struck in 201 and 202 for Caracalla have on their reverse portraits of Severus and Julia Domna, with the symbols of the Sun and Moon, emblems of eternity, and the legend *CONCORDIAE AETERNAE*.² The same legend, which was new in the time of Severus, appears also, with the usual *CONCORDIA*,³ on coins struck for Plautilla at her marriage.⁴ Inscriptions were dedicated to all members of the "divine house," including Plautilla and often Plautianus, or for their "prosperity," or for their "return and victory." Such offerings are recorded at Rome on an altar consecrated to *Fortuna Augg Augustorum duorum*,⁵ on a tablet to *Iuppiter Optimus Maximus Defensor Depulsor*,⁶ on pedestals to *Diana*⁷ and to *Isis Regina*,⁸ the last named dedicating a bath erected by Ceius Privatus, *princeps* of the *Castra Perigrinorum*, the barracks of a division of the *frumentarii*. The bronze tablet containing the names of soldiers who, after three years of service as watchmen, were entitled to the rights of citizens, is dedicated directly to Severus, Antoninus, Geta, Julia Augusta, and Plautilla Augusta.⁹ The top of the tablet is adorned with portraits in high relief of Julia Domna, Caracalla, and Geta.¹⁰ These are among the earliest of the dedications made by *vigiles* and *frumentarii*, the police force, to

¹ Dion Cassius, LXXVI, 3.

² Cohen, IV, p. 243.

³ *CONCORDIA* is the usual legend on coins in honor of an imperial marriage; cf. Preller, *Röm. Myth.* II, p. 260.

⁴ Cohen, IV, p. 247.

⁶ *C.I.L.* VI, 419.

⁸ *C.I.L.* VI, 354.

⁵ *C.I.L.* VI, 180.

⁷ *Ibid.* VI, 120.

⁹ *Ibid.* VI, 220. Cf. Kellerman, *Latercula Vigilum*, p. 99; De Rossi, *Annal. Inst. Arch.* 1858, p. 283.

¹⁰ Bernoulli (*Ikongraphie*, II, 3, p. 28) leaves the identification of these portraits in doubt. *Effigies Severi, effigies Getae, effigies Antonini* (*C.I.L.* VI, 220, notes). The portraits are not accurate likenesses; the features of the child in the middle are indistinct, but a slight inspection of the tablet proves that neither the woman's head, on the right, nor that of the lad with the wreath, on the left, can be "portrait of Severus."

members of the imperial family, under whose patronage these troops felt themselves to be, after Severus had reorganized their service.¹

Two cippi, dedicated for the whole imperial family to the "Unconquered Hercules" and the "Genius"² of a division of equites singulares, are interesting because they were set up by troops directly under the command of Plautianus. One of these dedications, dated September 13, 202 A.D., is as follows (*C.I.L.* VI, 226):

HERCVLI · INVICTO · SACR
 GENIO · NVM · EQ · SING ·
 AVGG · NN · PRO SALVTE
 IMPP · CESAR · L · SEPTIMI
 SEVERI · ET · M · AVRELI AN
 TONINI · ET GETE CESARI
 ET · IVLIAE · AVG · MATRI
 CASTROR · ET AVGG
 [e]T P[l]AVTILLE [a]VG E[t]
 C · F[u]LVI [Pla]V[tia]NI [p]R
 ✓ PR C V T[o]TIVSQVE DO
 MVS DIVINE · ET · TRIB
 OCCIO VALENTE ET · OCTAVIO
 PISONI · ET · Ψ EXSERC · FL ·
 TITIANO ET · AVREL · LVPO
 C · IVLIVS SECVNDVS
 VEXIL · ERE · SVO DEO · DED ·
 DEDIK³ · IDB · SEPT
 SEVERO III · ET
 ANTONINO · AV
 GG NN COS

¹ *Digest*, I, 12. Cf. fragments of inscriptions dedicated by these troops to the family of Severus (*C.I.L.* VI, 1039-1040).

² *Annali*, 1850, p. 85. *C.I.L.* VI, 226, 227.

³ On the left side of the cippus.

Africa did not fail to honor Plautilla and Plautianus as members of the imperial family. An association at Lambaesis dedicated the tablet which defined their constitution "for the good fortune and preservation of the time of our lords the Augusti," Severus and his sons, and of Julia Augusta, "mother of the Augusti and of the Camp," and of Plautilla Augusta.¹ At Thamugas buildings were dedicated in honor of the whole house.²

Other dedications made during the years 200–204 were occasioned by the general prosperity of the Empire. The establishment of the emporium of Pezus in Thrace, in the year 202, is recorded in a Greek inscription with a prayer "for the victory and immortality of the greatest and most divine Emperors . . . Severus and . . . Antoninus the Augusti and of . . . Geta Caesar and of Julia Domna, Mother of the Camp, and of their whole house and of the sacred senate and the people of Rome and of the sacred armies."³ Pedestals were dedicated at Urzelis⁴ and Cirta,⁵ in Numidia, to Julia Augusta, with all the titles of her husband and sons. Several inscriptions were found to other members of the imperial family, indicating that they were held in special honor in Cirta.⁶ An inscription of Syene, Egypt, is remarkable because of the form in which it gives the date, for Julia Domna is mentioned as if she shared the *imperium* of her husband and sons (*C.I.L.* III, 75):

I · O · M · HAMMONI CHNVBIDI
IVNONI REGINAE QVOR SVB
TVTELA HIC MONS EST · QVOD
PRIMITER · SVB · IMPERIO · P · R ·
FELICISSIMO SAECVLO D · D ·
NN · INVICTOR · IMPP · SEVERI ET
ANTONINI PISSIMORVM · AVGG
ET G[etae nobili]SS[imi Caes et]

¹ *C.I.L.* VIII, 2557.

² *Ibid.* VIII, 2368, 17872.

³ *Rev. Arch.* XXXV, p. 176.

⁴ *C.I.L.* VIII, 6340.

⁵ *Ibid.* VIII, 6998.

⁶ *Ibid.* VIII, 6994–7001.

IVLIAE · DOMNAE AVG M · K
 IVXSTA PHILAS NOVAE
 LAPICAEDINAE ADINVEN
 TAE TRACTAEQVE SVNT PARA
 STICAE ET COLVMNAE
 GRANDES ET MVLTAE SVB
 SVBATIANO AQVIL[α] PR
 AEG CVRAM AGENTE OP DOMENIC
 AVREL HERACLID DEC AL MAVR

General peace had brought prosperity to the Empire. The guilds of money changers and merchants about the Forum Boarium showed their gratitude for these conditions by erecting near their place of business a marble arch adorned with portraits in relief of Severus, Julia Domna, and their sons. It still stands near the so-called Janus Quadrifrons, and bears this inscription (*C.I.L.* VI, 1035):

IMP · CAES · L · SEPTIMIO · SEVERO PIO PERTINACI AVG ·
 ARABIC · ADIABENIC PARTH MAX · FORTISSIMO · FELI-
 CISSIMO
 PONTIF MAX TRIB POTEST · XII · IMP · XI · COS · III · PATRI ·
 PATRIAE ET
 IMP · CAES M · AVRELIO ANTONINO PIO FELICI AVG TRIB
 POTEST VII COS III P · P · PROCOS FORTISSIMOQVE
 PRINCIPI ET
 IVLIAE AVG MATRI AVG N ET CASTRORVM ET SENATVS
 ET PATRIAE ET IMP CAES M AVRELI ANTONINI PII
 FELICIS AVG
 PARTHICI · MAXIMI · BRITANNICI MAXIMI ·
 ARGENTARI ET NEGOTIANTES BOARI HVIVS LOCI QVI
 INVEHENT DEVOTI NVMINI EORVM

It is evident that lines 3-6 have been altered, and that the triumphal title of Caracalla has been substituted for Geta's name, while Julia Domna's title is amplified to fill the space made by erasing the names and titles of Plautilla.

The same year 204 A.D. witnessed the celebration of the Ludi Saeculares, which were supposed to have a special influence on the prosperity and good fortune of the state.¹ In the celebration of these games by earlier Emperors, though the prayer to Juno Regina which characterized the ceremonies of the second day was always made by a body of matrons, there is no record that a more honorable part had been given to an Empress than to any other patrician matron. In fact, the name of no Empress, not even of Livia, is preserved in the records of the celebration of these games, before the time of Septimius Severus, but the fragments of the inscriptions describing the secular games as given by this Emperor and his sons indicate that Julia Domna had a conspicuous part in the ceremonies of the second day. It seems probable, from the position of their names and the fragmentary context, that the Emperor, standing before the cella of Juno Regina, solemnly appointed the Empress, called *Julia Domna, Mater Castrorum, Coniux Augusti*, with the Vestal Virgins, Numisia Maximilla and Terentia Flavola, and one hundred and ten matrons, to offer a public prayer to Juno Regina for a blessing on the Roman people and to preside over the ceremonies which followed the sacrifice to the queen of the gods.²

These ceremonies appear to have marked both a reconciliation between Julia Domna and her husband, and the decline of the power of Plautianus. The year 205 witnessed his complete ruin, and his death at the hands of Caracalla.³ It is clear that the enmity between the Empress and the Emperor's minister had been no secret; for an eye-witness of the murder rushed into Julia Domna's presence, exclaiming, "Behold your Plautianus," and exhibiting hairs plucked from the fallen prefect's beard.⁴ The divorce and banishment of Plautilla followed immediately. Severus spared her life, but she was

¹ Zosimus, II, 6; 9, 7, 1.

² Mommsen, *Commentarii dei Ludi secolari*, Tab. E, fr. VI, l. 18; fr. VII, ll. 8, 10. Tab. F, ll. 6-10. Cf. *Eph. Ep.* 1898, p. 284, pt. IV, ll. 8-10.

³ Dion Cassius, LXXVI, 3; Spartianus, *Caracalla*, 1, 8.

⁴ Dion Cassius, LXXVI, 4.

executed in her place of exile, Lipara, as soon as his death freed Caracalla from restraint.¹

After the death of Plautianus, Julia Domna had no rival in influence with Severus. While it must be admitted that from this time the Emperor's policy was harsher and more arbitrary than before, this was due rather to a tardy conviction that he had been deceived by a friend than, as some have assumed, to the influence of a vindictive Empress.² There were many arrests on charge of treason, especially in Asia.³ An Ephesian inscription mentions Julia Domna, with the Emperor and her sons, as "baffling the murderous hopes of traitors" by "forethought,"⁴ a quality which is ascribed to the Augusta by coins.⁵ It is probable that African inscriptions to different divinities who are styled "preservers" of the imperial family⁶ reflect the official account of the death of Plautianus and subsequent executions. In one case, at least, a "plot" has been "detected."⁷

The philosophy in which Julia Domna found solace during her persecution proved to have for her more than a passing interest, for after her enemy's death she continued to be both a student and a patron of learning, and became the centre of a little court made up of philosophers and rhetors,⁸ of which Philostratus, her secretary,⁹ has left some slight account. In a letter written in defence of rhetors and addressed to Julia Augusta, he compliments, in the highest terms, her understanding and learning.¹⁰ It appears that she was interested in magic also, for, at her bidding, Philostratus wrote the life of Apollonius of Tyana,¹¹ the Pythagorean philosopher-magician. Among these courtiers there could probably have been found Dion Cassius, whose account of her is always favorable, and

¹ Dion Cassius, LXXVI. 6. Herodian, III, 13, 3.

² Boisseau, *Inscript. Lyon.* p. 541.

⁵ Cohen, IV, n. 163.

³ Dion Cassius, LXXVI, 7.

⁶ *C.I.L.* VIII, 12209, 1628, 14454.

⁴ *C.I.L.* III. 427 = *C.I.G.* 2971.

⁷ *Ibid.* VIII, 1628.

⁸ Philostratus, *Apol. Tyan.* I, 1; *Philiscus*, 2, 30.

⁹ Tzetzes, *Chil.* VI, 1303, quoted by Eckhel, VII, *Life of Julia Domna*.

¹⁰ Philostratus, *Ἰουλίᾳ Σεβαστῇ*.

¹¹ Philostratus, *Apol. Tyan.* I, 1.

Oppian the poet, who had, several years before, dedicated his "Cynegetica" to "Antoninus whom the great Domna did bear to great Severus."¹

As peace was long continued, Rome, as well as the provincial cities, became every day more magnificent. The Empress and the Emperor² restored buildings which had fallen into decay, or had been destroyed by fire under Commodus.³ Among the latter was the temple of Vesta, rebuilt by Julia Domna herself, as we are informed by many coins.⁴ One of them, a silver medal, bears on its face, with the legend IVLIA AUGUSTA, a portrait of the Empress holding a statuette of Concordia in one hand and a cornucopia in the other; the reverse presents "six Vestals sacrificing before the new temple," with the legend VESTA MATER. She also restored a structure in Trajan's Forum dedicated originally by Sabina for the use of the *Matronae*, possibly an assembly of matrons corresponding to the *Senaculum* which existed on the Quirinal⁵ in the time of Elagabalus.

The inscriptions of buildings erected or restored in several African towns before the year 208⁶ mention Julia Domna in dedications for the prosperity of the imperial house. A temple of Silvanus⁷ and baths⁸ were repaired at Lambaesis, baths⁹ and a portico¹⁰ at Siala, and a temple¹¹ at Bibae in Provincia Proconsularis, and buildings for unknown purposes in towns of Byzacium.¹² There were other dedications to members of the

¹ Oppian, *Cynegetica*, I, 3.

² Cf. inscriptions of the Pantheon, Porticus Octaviae, etc.

³ Herodian, I, 14.

⁴ *Not. Scav.* 1883, p. 477, Tav. XIX, d; cf. Cohen, IV, n. 140, 234-244.

⁵ *C.I.L.* VI, 997 (Mommson); cf. Lampridius, *Heliogabalus*, 4, 3.

⁶ These inscriptions contain the names of Severus and Antoninus "Augusti" and of Geta "Caesar." As the names of Plautianus and Plautilla do not appear, it is assumed that the dedications were not made between the years 202 and 205, in which Plautilla was Augusta; and, as Geta was not yet Augustus, they were not made after 208, in which year he became Augustus. Therefore these structures were dedicated 198-202 or 205-207.

⁷ *C.I.L.* VIII, 2671.

⁸ *Ibid.* VIII, 2706.

⁹ *Ibid.* VIII, 14457.

¹⁰ *C.I.L.* VIII, 588, 11731.

¹¹ *Ibid.* VIII, 906.

¹² *Ibid.* VIII, 12142, 14813.

imperial house made during the same period,—a statue of Mercurius Augustus dedicated with games by a newly appointed augur¹ at Thamugas, a tablet dedicated by *custodes armorum* at Lambaesis,² an offering to Neptune in Arada,³ and other gifts in the Numidian towns of Gurgus⁴ and Varzavi.⁵

In other parts of the Empire, also, dedications were made to the Empress herself or "for the prosperity" of all members of the imperial family. Julia Domna's name appears on one of three tablets⁶ found in the Graean Alps, the companion tablets being dedicated to Severus and Antoninus; on a tablet dedicated by Helvetians;⁷ on a dedication made by Laurentes Lavinates⁸ at Rome; and on an inscription in the great theatre of Ephesus.⁹ It appears with the names of other members of her family on a tablet referring to mysteries celebrated at Puteoli,¹⁰ and on a dedication¹¹ from Abia in Phrygia.

Individuals or corporations, at all times, manifested their loyalty to the imperial house by erecting statues of its members, as well as by the dedication of buildings or of honorary tablets. Statues¹² of Julia Domna were dedicated at Villa Magna, in Provincia Proconsularis by Victor and Fortunatus *ob honorem flamini perpetui*;¹³ at Biniana,¹⁴ Byzacium, set up by the town in company with statues of Liber Pater and of Severus; at Phua,¹⁵ Numidia, by the town; at Gaulus,¹⁶ by the town as one of a series of portraits of members of imperial families, set up during the first four centuries of the Empire; at Caparra,¹⁷ Spain, erected by the town council; at Beneventum,¹⁸ by the town. Greek inscriptions indicate that statues of the Empress were

¹ *C.I.L.* VIII, 17837.

³ *Rev. Arch.* XXXV, p. 173.

² *Rev. Arch.* XXXVIII, p. 140.

⁴ *C.I.L.* VIII, 15776.

⁵ *C.I.L.* VIII, 17638; cf. also *Rev. Arch.* XXXVIII, p. 321, n. 2.

⁶ *Ibid.* XII, 5709.

⁹ *C.I.L.* III, 6701.

⁷ Orelli, 361.

¹⁰ *Ibid.* X, 1585.

⁸ *C.I.L.* VI, 1047.

¹¹ *C.I.G.* add. 3857, d.

¹² The statue of the Empress is not preserved in any case cited. The fact of its erection is determined by the statement of the inscription or the form or surroundings of the monument on which it occurs.

¹³ *C.I.L.* VIII, 885.

¹⁴ *Ibid.* VIII, 75.

¹⁵ *Ibid.* VIII, 6306. This is a large marble basis bearing the date 205.

¹⁶ *Ibid.* X, 7502.

¹⁷ *Ibid.* II, 810.

¹⁸ *Ibid.* IX, 2165.

dedicated by the town Hermione¹ in Argolis, by the city of Samos,² and by the city council of Ephesus.³

Other inscriptions, which give no clew to the circumstances which occasioned their erection, contain simply Julia Domna's name and title, sometimes with the name of the dedicator; in other cases the inscriptions are mere fragments, barely preserving the name of the Empress.⁴ The following inscription from Axiopolis, in Moesia, will serve as an example of inscriptions found in Dalmatia⁵ and Moesia⁶ (*C.I.L.* III, 7485):

[I]VLIAE DO
MNAE AV[g]
[m]ATRI CA[s]
[t]RORVM
[n]AVTAE VN[i]
[ve]RSI DAN[u]
[vi] EX R P [sua]
SVB CVRA L I[ul]
FAVSTINIANI
LEG AVG N N

In several of the inscriptions mentioned above, Julia Domna is called "Mother of Augustus"⁷ or "Mother of Antoninus Augustus and of Geta Caesar,"⁸ as if her chief claim to honor, in addition to the fact that she was wife of the Emperor, was that she had borne heirs to the Empire. It appears, also, that her sons were described as "sons of Severus and of Julia Augusta,"⁹ a title which is of especial interest in contrast to the usage of the early Empire,¹⁰ for no Empress before Julia Domna was mentioned in dedicatory inscriptions as ancestress

¹ *C.I.G.* 1216.

² *C.I.G.S.* III, 1007. The genuineness of this inscription in doubt.

³ *C.I.G.* 2972.

⁴ *C.I.L.* VI, 2837; VIII, 1017, 1217, 8477, 12031, 14813. *Not. Scav.* 1896, p. 11. *Rev. Arch.* XXXII, p. 467, n. 71.

⁵ *C.I.L.* III, 1686, 3119, 4054, 7513.

⁶ *Ibid.* III, 7485.

⁸ *E.g.* *C.I.L.* II, 810.

⁷ *E.g. ibid.* IX, 2165.

⁹ *C.I.L.* VIII, 9035, 17871. *C.I.G.* 1075.

¹⁰ Tiberius refused the appellation "Juliae filius" (*Tac. Ann.* I, 14).

of an Emperor.¹ An inscription from Megara, on a statue of Caracalla, is as follows (*C.I.G.* 1075):

Αὐτοκράτορα Καίσαρα Μ. Αὐρήλιον Ἀντων[εῖνον]
 Σεβαστὸν Αὐτοκράτορος Καίσαρος Α. Σεπ[τιμίου]
 Σεουήρου Εὐσεβοῦς Περτίνακος Σεβαστο[ῦ Ἀρα-]
 βικοῦ Ἀδιαβηνικοῦ Παρθικοῦ Μεγίστου καὶ Ἰου[λίας]
 Σεβαστῆς Μητρὸς Στρατοπέδων ὕδν ἡ πόλ[ις]
 ἡ Μεγαρέων τὸν εὐεργέτην.

On Julia Domna's coins few legends and designs appear as new, because, as a rule, in the time of Severus, legends and designs were no longer invented; those used by preceding Emperors being adapted to existing circumstances.² Several legends which had not previously appeared on coins of an Empress have reference to the coinage and to imperial largesses. Where the face of the coin bears the name and portrait of the Empress, the reverse presents the legend *AEQVITAS AVG* and the design "Aequitas holding a horn of plenty,"³ *AEQVITAS AVGG*⁴ or *AEQVITAS PVBLICA*,⁵ with the design which had been put upon coins of the Emperor from Hadrian's time, "Three *Monetae* standing, each holding a balance and a cornucopia; at their feet heaps of metal."⁶ More significant than these are coins bearing on the reverse *LIBERAL AVG*, with the design "Liberalitas standing"; for this legend implies that Julia Domna distributed money stamped with her own name, as if she had a real share in the sovereignty, while before her time such gifts had been confined to Emperors.⁶ Julia Domna's coins present, also, the legend *FORTVNAE REDVCI*.⁷ From the time of Augustus, whenever an

¹ The young sons of Marcus Aurelius were called "sons of Antoninus and of Faustina" on sepulchral inscriptions (*C.I.L.* VI, 944, etc.) from Hadrian's mausoleum; and on the basis of a statue, Annius Verus Caesar (who died in 170; Momm. *Hermes*, VIII, 206) is styled "Imp. Caesaris M. Aureli Antonini Aug. . . et Faustinae Aug. filius" (*C.I.L.* VIII, 11323).

² Eckhel, *Doct. Num.* VII, 6166.

⁴ Cohen, IV, p. 105, n. 3.

³ Cohen, IV, p. 105, n. 1-2.

⁵ *Ibid.* IV, p. 105, n. 4.

⁶ Eckhel, VII, 6167. This design referred to the coinage and to imperial gifts (Cohen, IV, n. 103).

⁷ Cohen, IV, n. 64-68. This legend is found on a hybrid coin of Lucilla.

Emperor returned to Rome, after a victory, an altar was erected to *Fortuna Redux*, the patroness of a prosperous journey.¹ Her name is found on coins of Emperors from Vespasian's time, but Julia Domna is the first Empress so honored. The honor is connected, probably, with the title *Mater Castrorum*, in virtue of which the Empress's sojourn in camp during a campaign had an official significance. In many inscriptions already cited, prayer is made for the "return" and "victory" of Julia Domna,² as well as of Severus and his sons, the actual commanders of the army.

Several legends have a distinct reference to the prosperous condition of the Empire. *SECVRITAS IMPERI*³ is found only on the coins of this Empress and of her son, Geta. Again, Julia Domna is represented as herself the personification of "Fortuna Felix," where "Fortuna, with the features of Julia Domna, sits holding a horn of plenty; before her stands an infant."⁴ The legends *SAECVLI FELICITAS* and *FELICITAS PVBLICA*⁵ have the portrait of Severus on the face of the coin, and of Julia Domna and her sons on the reverse. *HILARITAS*⁶ and *FELICITAS* or *FELICITAS AVGG*⁷ have a similar reference. The legend *AETERNITAS IMPERI*,⁸ which appears first on coins of Severus and his family, seems to refer to the fact that there were two sons to perpetuate the imperial line. In the most interesting of these coins the face bears the legend *IVLIA AVGVSTA*, with a portrait of the Empress; and the reverse, *AETERNIT IMPERI*, with portraits of Caracalla and Geta, both as children.⁹ The most sig-

¹ Preller, *Röm. Myth.* II, pp. 187-188.

² "For perpetual victory and immortality" (*C.I.G.* 3956, b; 4701, b; cf. *Rev. Arch.* XXXV, p. 176), "for prosperity, return, and immortality" (*C.I.G.* 5973, also *C.I.L.* VI, 225, 227, 461, 738, 3786. Dessau, 433. *C.I.L.* VII, 226; III, 138. 7836. *I.G.S.I.* 922).

³ Cohen, IV, n. 181.

⁴ *Ibid.* IV, n. 201. *FORTVNAE FELICI*, with a different design, is found first on coins of Didia Clara (*ibid.* III, p. 403).

⁵ *Ibid.* IV, p. 111, n. 174-177; p. 100, n. 4, 7.

⁶ *Ibid.* IV, n. 71-73.

⁷ *Ibid.* IV, p. 110. *HILARITAS* and *FELICITAS* occur on coins of younger Faustina (*ibid.* III, 6145).

⁸ *Ibid.* VIII, pp. 361-362, list of these coins.

⁹ *Ibid.* IV, p. 100.

nificant design introduced on Roman coins in honor of an Empress is found on the coins already alluded to in connection with the marriage of Caracalla. The legend is *CONCORDIA AETERNAE*, with busts of Severus and of Julia Domna; the former wearing the spiked crown, the latter resting upon a crescent moon.¹ According to Eckhel these ornaments either identify the Emperor and Empress with the sun and moon, or express the wish that they, like the sun and moon, may be eternal.² The Roman Emperor had been represented with the spiked crown from the time of Nero, but the crescent had not been attributed to an Empress on coins struck in Rome before Julia Domna's time. The design is borrowed from coins of the Arsacidae, who called themselves brothers of the sun and moon.³ In these the sun and moon are both placed in connection with the king's portrait, but on Roman coins these honors are divided between Severus and Julia Domna.

Of portraits of Julia Domna, together with other members of the imperial family, which were made during the reign of Severus, only three can be identified with reasonable certainty. These are the mutilated reliefs of the arch of the Forum Boarium, the little heads on a tablet dedicated by the Watch, — now in the Palazzo dei Conservatori at Rome, — and a sardonyx cameo in the Cabinet des Médailles⁴ in Paris. In the first, Severus and Julia Domna stand before an altar, at which the Emperor is making an offering; both have their heads covered by drapery. Julia Domna appears as a woman of much dignity, somewhat taller than her husband, who stands a little in advance of her, at her right. It is difficult to see any trace of beauty in her round face, of a Semitic type, even after making due allowance for all mutilation. On the opposite side of the arch were portraits of Caracalla and Geta, but the latter has been effaced. On the cameo, Julia Domna and Severus, in profile, face their

¹ Cohen, IV, p. 243; cf. Eckhel, VII, pp. 181, 423.

² Eckhel, III, pp. 362, 545.

³ *Ibid.* VI, pp. 362, 545.

⁴ Bernoulli, *Röm. Ikon.* II, 3, pp. 28 ff.

sons, also presented in profile. All of these portraits were made soon after the beginning of the third century; they represent Caracalla and Geta as young boys. There are many portraits of the Empress, the most notable being the colossal bust of the Rotunda of the Vatican, "the largest extant female portrait of the Graeco-Roman period."¹ This bust, which represents the idealized Empress² as possessed of great charm, corresponds with the portraits on her earlier coins.

In the year 208 Julia Domna accompanied her husband and sons on an expedition against the Britons, a war which Severus, though in feeble health, conducted in person, in the hope of bringing about a reconciliation between his sons, whose open hatred of one another was a constant source of anxiety.³ It is probable that the Empress remained in York during the war, and occupied her leisure by studying the new races brought to her notice, as Dion Cassius mentions an interview with a captive Caledonian woman who answered the Empress's criticism of British civilization by a scathing comment on the state of morals in Rome.⁴ She attempted to make peace in her own family by obtaining for her younger son honor equal to his brother's; according to common report her son Geta, who was made Augustus in the year 209, obtained his rank at his mother's intercession.⁵ Coins struck in honor of Geta's *imperium* have, on the face, the name and portrait of the Empress; on the reverse, MATER AVGG, with a design representing Julia Domna as Cybele drawn by four lions.⁶ General interest in the welfare of the imperial family was made manifest by many inscriptions which record prayers for their prosperity, return, and victory.

In 207 at Casa in Numidia, troops detailed for special duty erected altars to Juppiter Optimus Maximus and the Nymphs "for the prosperity" of Severus, Julia Domna, and their sons.⁷

¹ Helbig, *Antiquities*, I, p. 220.

² Bernoulli, *Röm. Ikon.* II, 3, pp. 40-42.

³ Herodian, III, 14; Dion Cassius, LXXVI, 11; Spartianus, *Sev.* 18.

⁴ Dion Cassius, LXXVI, 16.

⁵ Spartianus, *Geta*, 5.

⁶ Cohen, IV, n. 116-119; cf. Eckhel, VII, p. 196.

⁷ *C.I.L.* VIII, 4322-4323.

A triumphal arch was erected at Vaga, in Byzacium, and dedicated to the *numen augustum* of the whole imperial family by citizens who acknowledged with gratitude the imperial favor shown in establishing the Colonia Septimia Vaga.¹ In the years 208 and 209 other offerings were made, as follows: tablets at Runiero,² in Moesia, and Naronas,³ Dalmatia, to Juppiter Optimus Maximus "for the prosperity" of Severus, his sons, and of Julia Augusta; a tablet at Grosskrotzenburg, dedicated "for the prosperity, victory, and return of the three emperors" and of "Julia Domna Augusta, Mother of the Augusti and of the Camp";⁴ at Rome a tablet, by *calatores*, to Julia Augusta, Mother of the Augusti and the Camp,⁵ and a "shrine with a god," dedicated by praetorians to Severus "for the prosperity and return" of Severus, Antoninus, Julia Domna, and the "divine house and also of the praetorian cohorts and for their victories";⁶ and a tablet dedicated for the same purpose by the *equites singulares*.⁷

At Colossae, in Phrygia, baths were dedicated "for the prosperity and victory and immortality of our lords and unconquered Emperors," Severus, Antoninus, and Geta, and "of the new Roman Hera and the whole divine house of the Augusti and the holy senate and the people of Rome."⁸ Certain magistrates of Sitifis, in Mauretania, erected *ob honorem aedilitatis* a basis "to the Victory of the three unconquered Augusti and of Julia Augusta, Mother of Caesar and of the Camp, and of their whole divine house."⁹ A hint that the trouble between the brothers was well known in the provinces is to be found in the inscriptions of statues dedicated at Thamugas, the one "to Mars Augustus, preserver of our three lords the Emperors . . . and of Julia Domna,"¹⁰ the other "to the Concord of the three Augusti . . . and of Julia Augusta."¹¹ An offering was

¹ *C.I.L.* VIII, 14395.

² *Ibid.* III, 8185.

³ *Ibid.* III, 1780.

⁴ Dessau, 433.

⁵ *Rev. Arch.* XXXVII, p. 362.

⁶ *C.I.L.* VI, 738.

⁷ *C.I.L.* VI, 3768.

⁸ *C.I.G.* 3956.

⁹ *C.I.L.* VIII, 8455.

¹⁰ *Ibid.* VIII, 17835.

¹¹ *Ibid.* VIII, 17829.

made at the temple of Aesculapius, in Lambaesis, in honor of the three Augusti and of Julia Domna.¹

Severus died in York in 211, leaving the Empire to both sons, in spite of his knowledge that all efforts had failed to reconcile them to each other.² The princes made a hasty settlement of affairs in Britain, and with their mother carried the Emperor's ashes to Rome.³ As the temper of the new Emperors caused a general expectation of trouble, sacrifices were offered to all the gods, but especially to Concordia.⁴ The brothers made some pretence of agreement, for a gold coin was struck with the legend *CONCORDIA FELIX* and a design representing Caracalla and Geta clasping hands in the presence of Julia Domna.⁵

The Empress made every effort to fulfil the office of peace-maker suggested by the coins. Failing in this, she tried to protect Geta from his brother; for it soon became evident that Caracalla, who had assumed the supremacy, purposed to destroy all who opposed him. The protests of their councillors and of the soldiers were either disregarded or punished.⁶ Herodian states that the council formulated a plan for the division of the Empire between the brothers, as the only tolerable solution of the problem, but that the plan failed because of the opposition of Julia Domna.⁷ As the proposition is mentioned by no other authority, it is generally believed that the scheme, as the rhetor-historian elaborates it, is a creation of his own,⁸ but there is no reason to doubt that plans for securing the peace of the Empire were discussed by the Emperor's councillors and that no scheme of the kind could succeed without the indorsement of the powerful Julia Domna.

¹ *C.I.L.* VIII, 2585.

² Dion Cassius, LXXVI, 15; Herodian, III, 15, 3; Spartianus, *Sev.* 19, 1.

³ Herodian, IV, 1.

⁴ Dion Cassius, LXXVII, 1; cf. Cohen, IV, p. 115, n. 21-22.

⁵ Cohen, IV, n. 24. Other coins represent the brothers each crowned by a Victory, and clasping hands.

⁶ Dion Cassius, LXXVII, 2. Herodian, IV, 3-4. Spartianus, *Carac.* 2, 4; *Geta*, 6, 4.

⁷ Herodian, IV, 3-4.

⁸ Cf. Herzog, *Gesch. und System*, II, p. 473, etc.; Duruy, *Hist. Rom.* VI, p. 240.

With reference to her office as mediator between her sons, coins of gold and silver bore a new amplification of her title. The face bears the legend IVLIA PIA FELIX AVG; the reverse, the legend MATER AVGG, MATER SEN M PATR (*Mater Augustorum Duorum Mater Senatus Mater Patriae*) and the design, Julia Domna seated or standing with a branch of olive and a sceptre in her hands.¹

A few inscriptions mention the young Emperors with their mother: an altar from Abusina, in Raetia, dedicated to "our lords the Emperors, . . . Julia Augusta, . . . Juppiter Optimus Maximus, Juno Regina, and the Genius of Coh. III Brit.";² an altar found near Salisbury, England, containing a dedication "for the prosperity and victory" of the Emperors and their mother;³ and a tablet from Volusinii, bearing the names of Julia Augusta and Caracalla,⁴ probably dedicated with a similar tablet to Geta.

In the following year, Julia Domna was forced to witness the murder of her second son. Caracalla, pretending to be ready for a reconciliation, persuaded his mother to invite him, with Geta, to an interview in her apartments. No sooner had Geta entered the room than centurions, concealed previously, rushed out to attack him. He threw himself on his mother for protection, crying, "Mother, mother, help, I am stabbed!" Her own exertion on his behalf was of no avail, for the centurion wounded the hand with which she tried to protect her son. Geta was killed in her arms.⁵ The murder was followed by execration of the memory of the dead prince; his name was erased from all inscriptions,⁶ his coins, so far as possible, were melted, his portraits were mutilated, and all mention of his name was construed as treason.⁷ The names of Plautianus and

¹ Cohen, IV, n. 110, 115. There is no record that this title was conferred by Senate or Army.

² *C.I.L.* III, 5935.

³ *Ibid.* VII, 226.

⁴ *Ibid.* XI, 2696, dated 211 A.D.

⁵ Dion Cassius, LXXVII, 2; Herodian, IV, 5; Spartianus, *Carac.* 2-4; Zosimus, I, 9, 4.

⁶ Geta's name has been wholly or partially erased from all inscriptions that are cited as referring to him, except *C.I.G.* 3956, b.

⁷ Dion Cassius, LXXVII, 12.

Plautilla were apparently erased at the same time. Inscriptions were restored, to suit the circumstances, by the substitution of Caracalla's triumphal titles for his brother's name, and the new amplification of Julia Domna's title for Plautilla's name.¹

At this time, Julia Domna's title received its final form. During the earlier part of her husband's reign she had been officially styled on inscriptions, *Iulia Domna Augusta, Mater Augusti et Castrorum*. In the inscription describing the secular games she was styled *Iulia Augusta, Mater Castrorum Coniux Augusti*,² and *Iulia Augusta, Mater Castrorum Reique Publicae*.³ On coins she had very early been named *Iulia Augusta* and *Iulia Pia Felix Augusta*. After Geta had been promoted to the *imperium* she was styled on coins, *Iulia Pia*⁴ *Felix Augusta, Mater Augustorum duorum, Mater Senatus*,⁵ *Mater Patriae*.⁶ After the death of Geta her official title, used by the Arval Brotherhood, and by imperial order to fill the space caused by erasing Plautilla's name, was *Iulia Pia Felix Augusta, Mater Augusti et Castrorum et Senatus et Patriae*. She was addressed

¹ There is one apparent exception to this statement (*C.I.L.* VI, 3401), where Julia Domna has all her titles on an inscription erected before Geta's death. The inscription, however, is preserved only in a copy (*l.c.* notes), and merely fails to indicate that the title is written in an erasure of Plautilla's name.

² *Eph. Ep.* 1898, p. 284, pt. IV, l. 9.

³ *Ibid.* pt. III, ll. 9-10.

⁴ *Pia* first occurs on an imperial inscription as an epithet of Julia Titi f. (*C.I.L.* IX, 1153), "Divae Iuliae Piae." The term is used in this case, as often in the case of private individuals, to show that she had "scrupulously and promptly performed all duties to the gods, her relatives, and friends" (Eckhel, VIII, p. 453, 'Pius'). Faustina Junior, after death, was called *Diva Faustina Pia* (Cohen, III, p. 141. *C.I.L.* VI, 1019, 1540, etc.). The *Pia* is apparently derived from her father's name, Pius. Commodus styled himself Pius Felix (*Commodus*, VIII, 1, 2). Severus borrowed both epithets for his son when he proclaimed himself son of Marcus Aurelius, and from Caracalla they were transferred to Julia Domna.

⁵ The title *Pater Senatus*, refused by Claudius (*Tac. Ann.* XI, 25), was assumed by Commodus (Cohen, III, p. 280, n. 396 ff.). Neither Severus nor his sons adopted it, but *Mater Senatus* seems to have been formed on the analogy of Commodus's title.

⁶ *Mater Patriae*, refused for Livia by Tiberius (*Tac. Ann.* I, 14); it was used, however, on African coins (Dion Cassius, VI, 47. Cohen, I, p. 165, n. 807; p. 207, n. 203). No other Empress, before Julia Domna, assumed the title.

also as *domina*,¹ as the Emperor was *dominus*. Though the Empress was not permitted to make any sign of mourning for her son,² she did not succeed in concealing her sorrow, for Cornificia, daughter of Marcus Aurelius and therefore adopted sister of Severus, dared to express sympathy for her bereavement. This implied criticism of Caracalla and furnished him with a convenient pretext for destroying a possible claimant to the Empire.³ Cornificia was condemned to death as a traitor and died with a dignity becoming the daughter of a philosopher.⁴

Inscriptions of 212 A.D. found in Verecunda, in Numidia, give expression to the official view of the situation, that Caracalla and his mother had been preserved from great danger and might now live in peace and prosperity. Their purport is as follows:

"To Juppiter Optimus Maximus the Preserver of the Emperor . . . Antoninus, . . . and of Julia Augusta, Mother of Augustus and of the Camp and of the Senate and of her Country,"⁵ and to Juno Concordia Augusta, for the prosperity of Caracalla and Julia Domna.⁶ This altar and pedestal were dedicated by members of the Propertius family because of the priesthood to which one of them had been appointed. A tablet dedicated on the birthday⁷ of Severus by members of the Watch, "for the prosperity and preservation from harm"⁸ of Caracalla and of Julia Augusta, proves that the soldiers were not slow to accept the situation. There is nothing to indicate the date of the following inscriptions, but as they refer to an escape from danger it seems probable that they were erected after Geta's death. The first, a dedication to Juppiter Optimus Maximus, the "Preserver of Antoninus . . . and of Julia

¹ Wilmanns, *Exempla*, 1737; *C.I.L.* VI, 1070, 2149. A woman who did not have the title Augusta might be styled *domina*: e.g. Fronto calls the mother of Marcus Aurelius *domina* (Fronto, *Ad Marc. Caes.* II, 21, 24, etc.).

² Dion Cassius, LXXVII, 2.

³ Herodian, IV, 6. Spartianus, *Carac.* 3, 8, 8, 4, 8; *Geta*, 6, 6.

⁴ Dion Cassius, *Excerpta Vat. Mai.* n. 114.

⁵ *C.I.L.* VIII, 4196.

⁶ *C.I.L.* VIII, 4197.

⁷ III Id. Apr.

⁸ *C.I.L.* VI, 1063.

Augusta," was found at Lambaesis.¹ The second, on a drum-shaped marble found at Rome, is as follows (*C.I.L.* VI, 1070):

· SAL · VIS ·
DOM · NIS ·
NN · ANTO
NI · NO · AVG · ET · IV · LI · A ·
PIA FE · LIX · RV · FI · NVS · ET · LVPERCILLA²

Inscriptions indicate that in the year 212, after Geta's death, a priest of Mercury at Sarra, in Byzacium, dedicated a temple to *Mercurius Sobrius* "for the prosperity of Antoninus," and of "Julia Augusta, Pia Felix, Mother of Augustus and of the Camp, and of the Senate, and of the whole divine house," ✓ and that a feast and games were given at the time of its completion, while a second priest dedicated in the same way the arch giving entrance to the precinct of the temple and statues of Mercury and of Severus.³ The epithets *pia felix* occur here for the first time in dated inscriptions, though they had been in use upon coins for several years.

In the year 213, inscriptions made use of this amplified title at a castellum of the Provincia Proconsularis, opposite the modern town of Nibber,⁴ and at Ferentinum.⁵

The "divine house" now included only the Emperor and Julia Domna, who was associated with him in honors to an extent which has no parallel. A remarkable indication of this fact is found in an Arval inscription, which contains the record of the sacred rites of the Dea Dia, as celebrated by that brotherhood on the 20th of May, 213. After the feasts, which were a necessary part of their ceremonials, it was customary to make *acclamationes* in honor of the Emperor.⁶ Though the names of women of imperial families, from Livia to Tranquillina, are included in Arval records, no other

¹ *C.I.L.* VIII, 2619.

² The lettering and punctuation are unusual.

³ *C.I.L.* VIII, 12006-12007; cf. *Rev. Arch.* XXXV, p. 487.

⁴ *Ibid.* VIII, 15722. Date given by accompanying inscription to Caracalla.

⁵ *Ibid.* X, 5826. Date given by accompanying inscription to Caracalla.

⁶ Henzen, *Acta Fratrum Arvalium*, p. 45.

Augusta is mentioned as honored with an *acclamatio*. It was offered after the banquet, in the following form (*C.I.L.* VI, 2086, l. 16):¹

FE[*h*]CISSIME FELICISSIME TE SALVO ET VICTORE FELI-
 CISSIME O NOS FELICES QVI TE IMP(*eratorem*) VIDEMVS
 DE NOSTRIS ANN(*is*) AVG(*eat*) T(*ibi*) I(*uppiter*) A(*nnos*)
 GERMANIC² MAX(*ime*) D(*i*) T(*e*) S(*ervent*) BRIT(*annice*)
 MAX(*ime*) D(*i*) T(*e*) S(*ervent*) TE SALVO SALVI ET SECVRI
 SVMVS TE IMP(*eratore*) FELIX SENATVS AVG(*uste*) D(*i*)
 T(*e*) S(*ervent*) IUVENIS TRIVMPHIS SENEX IMP(*erator*)²
 MAIOR AVG(*usto*) D(*i*) T(*e*) S(*ervent*) AVG(*uste*) AVG(*usta*)
 IVLIAE AVG(*ustae*) MATRI AVG(*usti*) FELICITER EX TE
 AVG(*usta*) AVG(*ustum*) VIDEMVS D(*i*) T(*e*) S(*ervent*) IN
 PERPETVO AVG(*usta*) AVG(*uste*)

The sacrifice of October 6, of the same year, was made because Julia Domna, as well as Antoninus, had been victorious in Germany. The account is as follows (*C.I.L.* VI, 2086, l. 23):

ISDEM COS
 PR NON OCT IN CAPITOLIO ANTE CELLAM IVNONIS
 REG(*inae*) OB
 SALVTE(*m*) VICTORIAMQVE GERMANICAM IMP(*eratoris*)
 CAES(*aris*)
 M(*arci*) AVRELLI ANTO
 NINI PII FELIC(*is*) AVG(*usti*) PAR(*thici*) MAX(*imi*) BRIT(*annici*)
 MAX(*imi*)
 GERMANICI MAX(*imi*) PONT(*ificis*) MAX(*imi*) TRIB(*uniciae*)
 POTE
 ST(*atis*) XVI IMP III COS III PROCOS ET IVLIAE AVG(*ustae*)

¹ Henzen, *Acta Fratrum Arvalium*, p. 196.

² Caracalla had been Augustus since 198 A.D. (Wirth, *Quaest. Sev.* p. 31. Mommsen, *Staatsrecht*³, II, 799). He had held *tribunicia potestas* from December 10, 197. The triumphal titles which he had borne previous to 207 A.D. had been borrowed from Severus. His actual military experience began with the war in Britain (Wirth, *Quaest. Sev.* p. 26).

PIAE FEL(*icis*) M(*atris*) IMP(*eratoris*) ANTONINI AVG(*usti*)
M(*atris*) SE
NATVS CASTRORVM ET PATRIAE FRATRES ARVALES
CO[*n*]VENERVNT ET
IMMOLAVERVNT PER L · ARMENIVM PERIGRINVM PRO
MAG(*istro*) VICE FLAVI ALPINI MAG(*istri*) COLLEGI
FRATRVM ARVALIVM I(*ovi*) O(*ptimo*) M(*aximo*) B(*ovem*)
M(*arem*) A(*uratum*) IVNONI REG(*inae*) BOV(*em*) F(*eminam*)
A(*uratum*) MINERVAE B(*ovem*) F(*eminam*)
A(*uratum*) SALVTI PVB(*licae*) B(*ovem*) F(*eminam*) A(*uratum*)
MARTI
VLTORI TAVRVM A(*uratum*) IOVI VICTORI B(*ovem*) M(*arem*)
A(*uratum*)
ET VICTORIAE B(*ovem*) F(*eminam*) A(*uratum*) LARIBVS
MILITARIBVS TAVRVM ALBVM FORTVNAE REDVCI
B(*ovem*) F(*eminam*) A(*uratum*)
GENIO IMP(*eratoris*) ANTONINI AVG(*usti*) N(*ostri*) TAVRVM
ALBVM
IVNONI¹ IVLIAE PIAE MATRIS ANTONINI AVG(*usti*) N(*ostri*)
SENATVS CASTR(*orum*) ET PA
TR(*iae*) B(*ovem*) F(*eminam*) A(*uratum*) ADFVERVNT CN ·
CATILIVS SEVERVS T STATILIVS SILANVS

It is worthy of note in this matter that the Juno—guardian divinity of the Empress, as well as the Genius of the Emperor—is reckoned among the deities who have brought glory and success to the Roman people. In other records of meetings of this fraternity during the reign of Caracalla, there is always mention of Julia Domna, with all her titles.² It is, perhaps, significant that the presiding officer of the brotherhood on these occasions is M. Julius Gessius Bassianus, probably a kinsman of the Empress.³ There is a record also, in Germany, on a tablet at

¹ The first offering of Arval Brotherhood to the "Juno" of an Empress, was made to the Juno of Poppaea, 63 A.D. (Henzen, *Acta Fr. Arv.* p. 79).

² *C.I.L.* VI, 2103, A, l. 9; B, ll. 10 and 11. 214 A.D.

³ Her father was Julius Bassianus of Emesa (see above, p. 260).

Meimsheim, that Julia Domna accompanied her son on the expedition against Raetia¹ (Henzen, 5507):

IMP · CAES · M · A[ur · Anton]
 PIO · FEL · [augusto]
 GERM PON MAXIM
 ET IVLIAE AVG · MATRI
 CASTRORVM
 OB VICTORIAM
 GERMANICAM

During the remaining years of Julia Domna's life she spent little time in Rome. After the expedition to Raetia,² the Emperor travelled through Thrace³ and crossed to Asia. After a perilous journey⁴—in which Caracalla, and probably Julia, had a narrow escape from shipwreck—mother and son came to Nicomedia.⁵ This city proved a congenial place of residence, for it was devoted to the worship of Severus and his house, and had already, in 208, erected statues to Julia Domna and Caracalla.⁶

In Asia, Julia Augusta began to act as her son's chief minister, both at Nicomedia and after they had removed their court to Antioch. All documents and letters, except those of the highest importance, were presented to her instead of to the Emperor.⁷ When he was absent in the field, all matters passed through her hands, and nothing which she could settle was referred to the Emperor. She had, too, a praetorian guard and a retinue worthy of an Empress.⁸ In fact, the relations between mother and son were so confidential that, in parts of the Empire, the charges made by Plautianus against Julia

¹ *Bulletino*, 1838, p. 164 (Borghesi).

² Dion Cassius, LXXVII, 14. *C.I.L.* VI, 2086, 2103.

³ Spartianus, *Carac.* 5, 8.

⁴ Dion Cassius, LXXVII, 16.

⁵ *C.I.L.* VI, 2103, l. 9. Henzen, *Acta Fr. Arr.* p. 86. Though Caracalla alone is said to "have been saved from danger," sacrifice is offered also to *Iunoni Iuliae Augustae*.

⁶ *C.I.G.* 3771. Preller, *Röm. Myth.* II, p. 452.

⁷ Dion Cassius, LXXVII, 18–20.

⁸ *Ibid.* LXXVIII, 4, 23.

Domna were revived; and in the scurrilous abuse of the Alexandrians she was "Iocasta," and Caracalla "Oedipus," — a jest for which they paid a dreadful penalty, if we may trust Herodian.¹ This charge was preserved by their contemporaries and was handed down by tradition, and so amplified and distorted that the biographer of Caracalla, a century later, represents the elderly Empress as a beautiful young stepmother who became mistress, if not wife, of her imperial stepson.²

On the other side, Dion Cassius, her contemporary, who was by no means an admirer of Caracalla, does not hint at such a charge, though he believes that the Emperor owed his worst characteristics — cunning and malice — to his Syrian inheritance.³ As Caracalla left the irksome details of administration to his mother,⁴ it was natural that the more conservative element in the Empire should have had hope of reaching the Emperor through her. It is possible that she may have been regarded as a leader of the conservative party in the Empire. She remained, still, a patron of learning; for Philostratus says that she prevailed upon Caracalla to grant a professorship in Athens to the needy Thessalian philosopher, Philiscus, who had found in her circle of literary men a refuge from persecution in Macedonia.⁵

Julia Domna's influence had little effect on Caracalla's general policy; for when she remonstrated with him for his extravagant gifts to the soldiers, with the words, "Every means of raising a revenue, just and unjust, has been exhausted," he answered, touching his sword; "Courage, mother. While we have this, money cannot fail."⁶

During these years of residence in Asia, Julia Domna's name was placed upon a large number of inscriptions, many of them

¹ Herodian, IV, 9.

² Spartianus, *Carac.* 10. Victor, *Caesar*, XXI; *Epitome*, XXIV. Eutropius, *Breviarium Hist. Rom.* VIII, 20. Orosius, *Hist. Rom.* VII, 18. Hieronymus, *Chronicon Olymp.* p. 248, etc.

³ Dion Cassius, LXXVII, 6.

⁴ Cf. Herzog, *Gesch. und System*, II, p. 475.

⁵ Philostratus, *Vitae Sophist. (Philiscus)*, II, 30.

⁶ Dion Cassius, LXXVII, 10.

dedications of public monuments. In the year 214, at Thamugas, a *lavacrum* or *ambulacrum* was erected by the town; and the date is given by the names of Caracalla and Julia in the ablative case,¹ as if she were her son's consort in power. At Theveste, in Numidia, her name is found over the northwest opening of a four-front arch; over the southeast opening is an inscription to the deified Severus, and over the southwest to Caracalla. From the inscription within, it is known that C. Cornelius Egrilinus left money to build this arch, with statues, and to establish *gymnasia*.² Her name occurs, also, on triumphal arches built at Zama³ and Cuicul,⁴ in 215 or 216. On the former the usual order of names is observed, — first the name of the deified Severus, second of Caracalla, and third of Julia Domna; on the latter there is a singular change, for the name of Severus comes last. The dedication is as follows (*C.I.L.* VIII, 8321):

IMP CA[es] M AVRELIO SEVERO ANTONINO PIO FELICI AVG
 PARTH[ic]O MAXIMO · BRITANNICO · MAX · GERMANICO MAX
 PONT [ma]X · TRIB · POT · XVIII⁵ · COS · IIII · IMP · III · P · P · PROCOS
 ET IVLI[ae] [d]OMNAE PIAE FELICI · AVG · MATRI · EIVS · ET
 SENATVS ET PA
 TRIAE ET [cast]RORVM ET DIVO SEVERO AVG · PIO PATRI
 IMP · CAES · M · AVRELI SE
 VERI ANT[onini] PII [felix]IS AVG · ARCV M TRIVMPHALEM
 A SOLO · D · D · RES · P · FECIT

There were dedications, also, at Lambaesis,⁶ and at Subzuar,⁷ in Numidia, upon buildings which have not been identified. Milestones show that several roads in Numidia and Mauretania,⁸ and the aqueduct which supplied Theveste with water,⁹ were built under the patronage of Caracalla and Julia. At Vere-

¹ *C.I.L.* VIII, 2369-2371.

⁴ *C.I.L.* VIII, 8321.

² *Ibid.* VIII, 1856; cf. 1855-1857.

⁵ 216 A.D.

³ *Ibid.* VIII, 1798.

⁶ *C.I.L.* VIII, 2708, 2707, 2704, 2712.

⁷ *Ibid.* VIII, 6002; cf. dedication at Furni (*Rev. Arch.* XXXIII, p. 438).

⁸ *Ibid.* VIII, 10231, 10197-10198, 10202, 10379, 10340.

⁹ *Ibid.* VIII, 10683.

cunda, Numidia, a temple was dedicated to Saturn and Ops;¹ and at Thubba, in the Provincia Proconsularis, a temple to Mercurius Sobrius, the Genius of Sesase, and Pantheus Augustus,² both inscribed, "For the prosperity" of the Emperor and Empress. At Apulum, Dacia, a temple with horologiae was dedicated, for the same purpose, to Juppiter Optimus Maximus and Juno Regina.³ The inscriptions on two columns of the great temple at Baalbec have a more distinct reference to the unsettled condition of the Empire; for they indicate that these columns, with their gilt-bronze capitals, were dedicated to the Great Gods of Heliopolis, "for the prosperity and victories" of Caracalla and Julia Domna.⁴ A pedestal from Aspra Spitra, in Phocis, was dedicated by the city of Anticyra in honor of "Julia Domna, Mother of M. Aurelius Antoninus . . . Mother of the Camp."⁵

Many other inscriptions have reference to the frequent dangers to which the imperial family were exposed in the East. "For the prosperity" of the Emperor and Empress, there were dedications to different divinities in Moesia, an altar at Scupi,⁶ a tablet erected by priests near Noviodunum,⁷ and tablets by servants of the Emperor in Dacia⁸ and Pannonia.⁹ A slight variation from the usual formula is presented by a votive tablet of Luna, on which prayer is made "for the prosperity" of Caracalla and Julia Domna "and the well being" of the city Luna by "priests of the altars of Liber Pater."¹⁰ In Spain a *legatus Augusti* of the Legio VII Gemina prays "for the prosperity and perpetuity of the Empire," of Caracalla and Julia Domna.¹¹ At Ampelum, in Dacia, a procurator prays "for their prosperity, victory, and preservation."¹² At Portus Traiani several inscriptions with the names of Caracalla and Julia indicate that they were honored by statues and votive offerings.¹³ At Ostia, Felicissimus paid a vow by dedicating a tablet for the "health and

¹ *C.I.L.* VIII, 2670.

² *Ibid.* VIII, 14690.

³ *Ibid.* III, 1070.

⁴ *Ibid.* III, 138.

⁵ *I.G.S.* III, 7.

⁶ *C.I.L.* III, 1697.

⁷ *Ibid.* III, 7520.

⁸ *Ibid.* III, 1565.

⁹ *Ibid.* III, 3269.

¹⁰ *C.I.L.* XI, 1335.

¹¹ *Ibid.* II, 2661.

¹² *Ibid.* III, 7836.

¹³ *Ibid.* XIV, 122-124.

victory of the Emperor Caesar M. Aurelius Antoninus and of Julia Augusta, Mother of Augustus and of the Camp.”¹

Other dedications in many parts of the Empire were made to Julia Domna, without reference to the circumstances of the time.² In most of them there is little deviation from the ordinary formula of dedication, and no indication of the donor. As might be expected, a majority of these inscriptions come from Africa, though others were found in Italy and Britain.

A few inscriptions, which belong to the period when Julia's political power was greatest, merit special attention. The first, found near Aquae Originæ, in Tarraconensis, is a prayer for the Empress alone (*C.I.L.* II, 2529):

PRO · SALVTE
IVLIAE · AVG
MATRI
CASTROR
ET · AVG · CLAV
DIVS · MA
RINVS —

The others were found in Rome. The first is a marble block, which probably served as a base of a statue; with the exception of the Spanish inscription just quoted, it is the only extant dedication for the prosperity of Julia Domna alone³ (*C.I.L.* VI, 786):

VESTAE DONVM · PRO SALVTE
IVLIAE · AVG · MATRIS

¹ *I.G.I.S.* 922.

² *C.I.L.* VI, 1048; VII, 7, 1002, 1047; VIII, 2371, 4285, 8320, 9993, 12031, 10610; X, 3830; XI, 1427. Orelli, 231.

³ In the recent excavations of the Basilica Aemilia a similar inscription for Caracalla has been discovered (*Rev. Arch.* XXXVI, p. 304):

VESTAE · DONVM · PR[o salute]
IMP · M · ANTONINI · PII · AV[g · pont max]
TRIB · POTEST · XVI · COS IIII [p p]
EVTYCHES · LIB · FICTOR · CVM FILI[is]
VOTO · SVSCEPTO

M ANTONINI AVG N·P·M·
EVTYCHVS FICTOR CVM FILIS
VOTO SVSCEPTO

This stone, found in the Forum Romanum, was probably dedicated in the temple of Vesta; for an offering is made on Julia Domna's behalf because she is mother of the Pontifex Maximus,¹ and therefore stands in close relation to the Vestals.

A bronze tablet made to cover an aperture has some reference to the Empress's private property.² A tablet erected by the guild of watermen indicates that a member of that body erected statues of "Antoninus Augustus our lord" and of "Julia Augusta our lady."³

Although inscriptions do not indicate any change in the sentiments of soldiers and citizens toward the Emperor and his mother, the event proved that Caracalla had forfeited the support of the army,⁴ on which his Empire depended. He was murdered at Carrhae on April 8, (207) A.D.,⁵ by conspirators and the praetorian prefect Macrinus, who was immediately chosen as his successor. Delay in the delivery of official messages was the immediate cause of Caracalla's ruin; for documents sent from Rome with full information concerning the plot were carried first to Julia Domna at Antioch, and were, in consequence, too late to warn the Emperor of his danger.⁶

When the news that Caracalla had been killed and that Macrinus had been proclaimed Emperor reached Julia Domna at Antioch, she seemed at first to be stunned by the magnitude of her misfortune; not that she mourned overmuch for the son who had murdered his brother in her arms, but because

¹ *C.I.L.* VI, 786, notes.

² *Ibid.* VI, 2149. Similar tablets (*ibid.* VI, 2146-2148) refer, evidently, to the property of Vestal Virgins.

³ Orelli, 4115.

⁴ Spartianus, *Carac.* 4-6. Herodian, IV, 9-12. Zosimus, I, 10, 1.

⁵ Dion Cassius, LXXVIII, 6. Herodian, IV, 13. Spartianus, *Carac.* 6-7. Zosimus, I, 10, 1. Orosius, p. 506 (A.V.C. 969), etc.

⁶ Dion Cassius, LXXVIII, 4.

she must leave the imperial state which she had enjoyed for twenty-four years, and must return to private life.¹

To her surprise, the new Emperor seemed to be in no haste to deprive her of her rank. He not only sent messages of condolence to her, but he gave the honors of a royal funeral to her son. She was quick to discern the weakness which prompted Macrinus to this policy, and turned from her mourning to plot against him.

It was believed by some of her contemporaries that though she suffered from an incurable disease, she was ambitious to become a "new Semiramis" and to rule, in name at least, the Empire of which she had been the administrative head. She seems to have expected that the senate and those of the soldiers who were devoted to her house and the "Mother of the Camp" would support her. While she was engaged in these schemes, Caracalla's ashes, which had been sent to Rome for burial, reached their destination. He was deified at the bidding of Macrinus, by a subservient senate, who nevertheless made no attempt to conceal their real hatred of his memory. Their conduct convinced Julia Domna that she could hope for no assistance from them, and when Macrinus, informed of her movements, ordered her to leave Antioch, she gave up all effort to maintain herself and committed suicide in May or June, 217 A.D.²

Her ashes were carried to Rome and deposited with those of Geta in the "monument of Gaius and Lucius";³ afterwards, her sister Maesa, having carried to a successful issue the plans of which she had only dreamed, had the urn removed to the "shrine of Antoninus."³ She was deified several years later,

¹ Dion Cassius, LXXVIII, 23.

² *Ibid.* LXXVIII, 9, 12, 23. Herodian, IV, 13.

³ Dion Cassius, LXXVIII. Reimer (note on Dion LXXVI, 15) identifies the "shrine of Antoninus" with the Mausoleum of Hadrian. The last inscription (in date) containing Julia Domna's name is the dedication of a statue erected at Sebaste, in Phrygia, by Teneius Sacerdos, proconsul (*C.I.G.* 3882, g). As Sacerdos was consul in 219 the dedication must be dated 220 or after. It is either a unique example of a posthumous dedication to an undeified empress, or, as I suspect, there has been some mistake in transcribing the inscription.

probably at the same time with Maesa by the latter's grandson, Severus Alexander.¹ Her statue was erected together with that of the deified Severus in Africa in the year 229, as the following inscriptions prove:

DIVAE IVLIAE
DOMNAE
DEC GILLITANI
S P F²·DIVO SEVERO AVO
IMP·CAES·M·AVRELI SE
VERI ALEXANDRI PII
FELICIS AVG·PONT·MAX
TRIB·POT·VIII COS III
PP
DECVR GILLITANI·S·P·F³

The coins struck in honor of her deification have the legend DIVA IVLIA AVGVSTA, with the portrait of the Empress veiled; on the reverse CONSECRATIO S. C., with different designs, "a peacock" and "Julia Domna veiled holding a spear in her hand; she is carried upward by a peacock."⁴ The latter design shows her apotheosis as *Mater Castrorum*. The peacock, emblem of Juno, is represented on consecration coins of both Faustinas.⁵

No enumeration of the inscriptions in honor of Julia Domna would be complete without an account of the various divinities to whom prayer was made on her behalf, and without some attempt to discover from these records her relation to the worship of the Emperor and the national religion.

The name of no other Empress appears so frequently in prayers or dedications made for the Emperor or his heirs.

¹ Not under Elagabalus, because the number of *Divi* to whom the Arval Brethren made offerings did not change from 218-224 A.D.; Mommsen, *Staatsrecht*, II, 833, n. 3. Cf. *C.I.L.* VI, 2104, 5, and 2107, 14.

² *Rev. Arch.* XXXV, p. 178, n. 56.

³ *Ibid.* XXXV, p. 178, n. 57.

⁴ Cohen, IV, p. 108, n. 24, 25. Eckhel, VII, p. 197.

⁵ Cohen, II, p. 426; III, p. 141.

The inscriptions are most frequently dedications to Jupiter under his various aspects: to Juppiter Optimus Maximus, at Luna,¹ Viddi² and Runjero,³ all prayers for the whole family; to Juppiter Optimus Maximus Conservator,⁴ four dedications on various occasions; to Juppiter Optimus Maximus Dolichenus,⁵ a Syrian god, whose worship, introduced in the time of Commodus, became very popular under Severus;⁶ to Juppiter Depulsor;⁷ and to Juppiter Optimus Maximus Dolichenus Depulsor.⁸

It was entirely natural to offer supplication to the king of gods for the safety of the greatest of men; for the same reason prayer was offered to this deity and his consort Juno, for the prosperity of their earthly representatives, the Emperor and his wife, or later, the Emperor and his powerful mother.⁹ So we have prayers or dedications to Juppiter Optimus Maximus and Juno Regina "for the preservation and long continuance of the Empire" of Caracalla and Julia Domna.¹⁰ Other female divinities also are connected with Jupiter, Juno Dea Regina and Minerva,¹¹ and the Nymphs.¹² The secular games also were celebrated with especial honor to Juppiter Optimus Maximus and to Juno Regina, and in the ceremonies relating to the goddess Julia Domna played a conspicuous part.¹³

Mars, as well as Jupiter, was invoked as "preserver" of the imperial family, and dedications were made to him in Africa,¹⁴ where interest in their welfare was most sincere. In the Provincia Proconsularis temples were dedicated to Mercurius Sobrius and to Aesculapius, with the conventional inscription "for the prosperity of the imperial family,"¹⁵ and an arch and

¹ *C.I.L.* XI, 1322.

² *Ibid.* III, 1780.

³ *Ibid.* III, 8185.

⁴ *Ibid.* VIII, 1628, 2619, 4196, 12209.

⁵ *C.I.L.* VI, 410; III, 7520.

⁶ Preller, *Röm. Mith.* II, 406.

⁷ *C.I.L.* III, 3269.

⁸ *Ibid.* VI, 419.

⁹ As under Aurelian the Emperor was identified with the sun, because the sun is the highest divine power in nature. Preller, *Röm. Mith.* II, p. 408.

¹⁰ *C.I.L.* II, 2661; III, 1070.

¹¹ *Ibid.* VIII, 906.

¹² *Ibid.* VIII, 4322.

¹³ Cf. p. 273, note 2.

¹⁴ *C.I.L.* VIII, 14454, 17835.

¹⁵ *Ibid.* VIII, 12006-12007, at Sarra.

statues of Mercury;¹ a temple, for the same purpose, to Mercurius Sobrius, the Genius of Sesase and Pantheus Augustus;² in Thamugas, a statue to Mecurius Augustus;³ at Bonarda, a dedication to Neptunus Augustus.⁴ An offering in Dacia, to Hercules, for Caracalla and his mother,⁵ was dedicated probably because the Emperor had shown himself an admirer of that hero. At Rome the *equites singulares* made their offering for the imperial family to the Unconquered Hercules, and the Genius of their troop.⁶ In Africa, at Lambaesis, temples were built to Silvanus⁷ and to Aesculapius, Salus, Juppiter Valens, and Silvanus.⁸ Italian dedications to Liber Pater⁹ contain the names of the imperial family with a prayer in one case "for their prosperity and victory." Male and female deities are united in dedications for the whole imperial household to the Immortal Gods and Goddesses,¹⁰ to Lord Saturn and Queen Ops,¹¹ near Lambaesis, and to the Sun and Moon¹² at Lisbon.

The last-mentioned dedication contains a slight variation from the usual formula, and deserves attention because it is a prayer to divinities whose attributes Severus and Julia Domna had assumed on coins, with a legend referring to perpetual peace (*C.I.L.* II, 259. 10):

SOLI AETERNO
LVNAE
PRO · AETERNITATE · IM
PERI · ET · SALVTE · IMP · CAES · [L ·]
SEPTIMI · SEVERI · AVG · PII · ET
[imp] CAES · M · AVRELI · ANTONINI

¹ *Rev. Arch.* XXXV, p. 487.

² *C.I.L.* VIII, 14690; Sesase is the name of a town.

³ *Ibid.* VIII, 17837.

⁷ *C.I.L.* VIII, 2671.

⁴ *Rev. Arch.* XXXV, 173.

⁸ *Ibid.* VIII, 2585; cf. 2579.

⁵ *C.I.L.* III, 1565.

⁹ *Ibid.* VI, 461; XI, 1335.

⁶ *Ibid.* VI, 226-227; cf. 224.

¹⁰ *Ibid.* XII, 2491.

¹¹ *Ibid.* VIII, 2670.

¹² *Ibid.* II, 259; cf. Eckhel, VII, p. 181; Cohen, IV, p. 243, n. 1-5.

AVG · PII [et P Septimi · Getae · nob)
 CAES · ET · [Iu]LIAE · AVG · MATRIS · C[a]S[tr]
 DRVSVS · VALER · COELIANVS
 V · [c] · [legat]VS · AVGVSTORVM
 CV[ram ag] VALE[r]IO [qu]A[drato]
 Q · IVLIVS · SATVR[ninus et]
 Q · VAL[erius] ANTONI[anus]

With the last mentioned may be classified the dedication of a portico to the Great Gods of Heliopolis,¹ an altar to Sol Mithras Deus,² and to Deus Invictus Sol,³ erected because of the "victories of our Augusti," for the four inscriptions refer to the worship of the Sun, a cult which we have reason to believe was especially affected by the imperial family, because of Julia Domna's Syrian origin, and the fact that her father was priest of the Sun at Emesa. We know that the cult was established in the imperial household because there exists an inscription of "a freedman of the three Augusti" who styled himself *Sacerdos invicti Mithrae domus Augustanae*.⁴

Prayers for the whole imperial house are addressed to female divinities as follows: on altars to Cybele, *Mater Deorum*,⁵ at Mascula, in Numidia; to Juno Regina and Minerva,⁶ at Ampe-lum, Dacia, and Juno, Concordia Augusta,⁷ at Verecunda; on pedestals to Diana,⁸ Isis Regina,⁹ and Vesta,¹⁰ at Rome; to Nemesis,¹¹ at Ostia.

There were dedications, too, to deified personifications of abstract ideas, to the Victory of the three unconquered Augusti and of Julia Augusta¹²; to the Concord of our lords the Emperors, L. Septimius Severus, and M. Aurelius Antoninus, and P. Septimius Geta, the three Augusti, and of Julia Augusta;¹³

¹ C.I.L. III, 138.

² *Ibid.* III, 1697. Interpretation of the initials S.M.D. as given in note of *ibid.* l.c.

³ *Ibid.* VI, 738.

⁴ *Ibid.* VI, 2271; cf. Cumont, *Textes et Monuments relatifs aux Mystères de Mithras*, II, p. 100.

⁵ C.I.L. VIII, 2230.

⁸ C.I.L. VI, 120.

¹¹ I.G.I.S. 917.

⁶ *Ibid.* III, 7836.

⁹ *Ibid.* VI, 354.

¹² C.I.L. VIII, 8455.

⁷ *Ibid.* VIII, 4197.

¹⁰ *Ibid.* VI, 786.

¹³ *Ibid.* VIII, 17829.

to the Fortune of the three Augusti, "for the prosperity and return" of the whole imperial family.¹

To the same class belong several dedications to the Genius² or Tyche,³ of a town or troop or an individual. Besides those Genii already named in connection with some other divinity, pedestals were dedicated to the Genius of Legio III, Augusta Pia Vindex⁴ and the Genius of Lambaesis,⁴ the Genius of a centurion⁵ and of a cohort,⁶ and to the Genius of the Emperor and the Juno of the Empress in Arval inscriptions.⁷

Deity is ascribed to Julia Domna on comparatively few coins and inscriptions, and only in the most general terms. The conventional phrases *numini maiestatique devotus* and *numini devotus*⁸ occur on inscriptions referring to the whole family, *numini eius devotus*,⁹ rarely. The Colonia Septimia Vaga described itself as *nomini et auspiciis divinis eorum inlustrata* and dedicated an arch, *numini Augusto eorum*.¹⁰ The Colonia Julia Concordia Felix at Beneventum in erecting a statue to the Empress described itself as *devota maiestati Augg*.¹¹ The *domus divina*¹² mentioned on many inscriptions included the Emperor, the Empress, their sons, Plautilla, and at times Plautianus.

Of divine attributes both *Providentia* and *Aeternitas* are assigned to Julia, the former on coins¹³ and on a single inscription¹⁴ from Ephesus, the latter in the phrases AETERNITAS AVGG and AETERNITAS IMPERI on coins¹⁵ with her name and portrait. The term *Aeternitas* is not always used consistently, for at one time the Emperor and Empress are identified with the sun and

¹ C.I.L. VI, 180.

² Ibid. III, 5935; VI, 220, 224-227; VIII, 2527-2528, 14690.

³ C.I.G. 3771, 3956. Rev. Arch. XXXV, p. 176.

⁴ C.I.L. VIII, 2527-2528.

⁶ C.I.L. III, 5935.

⁵ Ibid. VI, 220.

⁷ Ibid. VI, 2086.

⁸ Ibid. VI, 226, 1035; VIII, 1798, 2368, 2371, 4395, etc.

⁹ Ibid. II, 810, 7485; VII, 963.

¹⁰ Ibid. VIII, 1215, 1, 5.

¹¹ Ibid. IX, 2165, 1, 11.

¹² Ibid. VI, 226, 461, 3768; VIII, 2671, 2230, 4322-4323, 8455, 12006-12007, 14690, etc.

¹³ Cohen, IV, n. 163.

¹⁴ C.I.L. III, 427.

¹⁵ Cohen, IV, n. 137-139, etc.

moon as emblems of eternity,¹ and at another prayer is made not only for the eternity of the Empire, but also for the eternity of the imperial family.²

There are attributed to her also certain personal qualities or virtues, the names of which appear on many coins struck in the earlier Empire, such as *Pietas*,³ *Pudicitia*,⁴ and *Fecunditas*,⁵ while *Concordia Aeterna*⁶ was represented first on coins of Julia Domna's family. The Empress seems to be considered the personification of each of these attributes, and in this as divine.

On Julia Domna's coins, in a few cases, she was identified with some divinity. She is Fortuna, with the legend *FORTVNAE FELICI*.⁷ On the coins which give her the title *MATER AVGG, MATER SEN, M. PATR*, she is, perhaps, Concordia personified, for she is represented as holding an olive branch and a sceptre.⁸ With the legend *PVDICITIA* she is represented as Chastity "standing veiled or seated holding a patera."⁹ With the legend *MAT. AVGG.*, Julia Domna is represented as Cybele drawn by four lions.¹⁰ In the design of each of these coins the divinity has the features of Julia Domna.

Coins referring to the Neocorate of Sardis and Tarsus show evidence that the Empress was worshipped in these cities by games of several kinds. In the "Chrysanthina" of Sardis she seems to have been honored as Ceres, in the "Choraia" of Tarsus, as Proserpina. In Tarsus, also, games called "Theogamia" were celebrated in honor of the marriage of Severus and Julia Domna.¹¹

There are found on Julia Domna's coins the names and images of many goddesses, Ceres,¹² Cybele,¹³ Diana Lucifera,¹⁴

¹ Cohen, IV, n. 137-139, etc.

² *C.I.G.* 3956, b, 4701, b, 5973.

³ Cohen, IV, n. 147 f.

⁴ *Ibid.* IV, n. 164 f.

⁵ *Ibid.* IV, n. 34 f.

⁶ *Ibid.* IV, p. 243.

⁷ *Ibid.* IV, n. 56.

⁸ *Ibid.* IV, n. 110.

C.I.L. II, 259. *Rev. Arch.* XXXV, p. 176.

⁹ Cohen, IV, n. 164.

¹⁰ *Ibid.* IV, n. 116; cf. Eckhel, VII, p. 196.

¹¹ Krause, *Neocoros*, p. 79 f.

¹² Cohen, IV, n. 11-20.

¹³ *Ibid.* IV, n. 33.

¹⁴ *Ibid.* IV, n. 22, 140.

Vesta,¹ Juno under various aspects, Juno Conservatrix, Juno Lucina, Juno Regina,² Venus under different aspects, Venus Genetrix, Venus Felix, Venus Victrix.³ These goddesses had been represented before the time of Julia Domna on coins of several Empresses; most of them, however, appeared for the first time on coins of the Faustinas. The legends IVNO CONSERVATRIX⁴ and LVNA LVCIFERA,⁵ with their designs, appear for the first on Julia Domna's coins.

Inscriptions confirm the testimony of coins, that this Empress was occasionally identified with some divinity. The town council of Lampsacus erected a statue of her as "Julia Augusta, Hestia, the new Demeter,"⁶ the expense being met by Dionysius, "priest of the Augusti and flamen of their whole house." At Colossae, in Phrygia, in a dedication for the "prosperity and victory and immortality" of Severus and his sons she is named the "New Roman Hera."⁷ At Aphrodisias, in Caria, one Ammia is called priestess of the "Goddess Julia, the new Demeter."⁸ In three inscriptions she received divine honors in her own person; on an altar dedicated to her in Arthuret, Britain, *pro devotione numinis eius*,⁹ and on a tablet dedicated at Vallis Velini, "to Julia Domna Augusta Pia Felix, Mother of the Emperor Antoninus Pius Felix Augustus and of the Camp and of the Senate and of her Country, most holy, and . . . to Victory,"¹⁰ and on an altar dedicated to Juppiter, Juno, Minerva, the Genius of a legion, and to Julia.¹¹

From coins and inscriptions, therefore, we infer that Julia Domna received no unusual divine honor. All that was given her had been offered in larger measures to her predecessors. Even on coins, excepting those which deify her, the only new types and legends relating to worship are Juno Conservatrix and Luna Lucifera, and the bust of the Empress resting on the crescent. A slightly larger number of coins and dedications in

¹ Cohen, IV, n. 220-232.

² *Ibid.* IV, n. 93-99.

³ *Ibid.* IV, n. 184 ff.

⁴ *Ibid.* IV, n. 92.

⁵ Cohen, IV, n. 107.

⁶ *C.I.G.* 3642.

⁷ *Ibid.* 3956, b.

⁸ *Ibid.* 2815.

⁹ *C.I.L.* VII, 963.

¹⁰ *Ibid.* IX, 4637.

¹¹ *Ibid.* III, 5935.

honor of Juno¹ may indicate that the "New Roman Hera" was a rival to that divinity, and it is not without significance that the deified Julia Domna is carried on high by Juno's bird, the peacock.

Coins struck in Julia Domna's honor exceed in number and variety those bearing the name of any other Empress. Cohen enumerates over three hundred and fifty varieties of them; many of which no mention has been made in these studies were struck in different colonies of the Empire and afford reliable evidence that Julia's honors were confined to no one locality.

Inscriptions, too, confirm the testimony of Dion Cassius² that this Empress surpassed all of her predecessors in the amount of public honor she received. The majority of the more than one hundred and eighty inscriptions mentioned have some public significance. As each one has been cited in connection with the circumstance in the Empress's life which occasioned the dedication, it remains only to note the person by whom the dedications were made and their reason for making these offerings. Thirty-one were dedicated by civil magistrates, — legati, procurators, and the councillors of provincial towns; a few by minor officials on the occasion of their entrance to some magistracy which necessitated a donation to the state. Thirty-four were by army officers or soldiers of legions in different parts of the Empire, or by a legion as a whole, or by one of its divisions. Most of these were made by soldiers in some way connected with the imperial family, as the legion at Lambaesis, the police troops of Rome and Ostia, and the praetorians and equites singulares, members of the imperial

¹ Cohen, IV, pp. 107 ff. *C.I.L.* II, 2661; VIII, 906; III, 1070; *C.I.G.* 3956, b.

² The fact that the Dion Cassius lived under the powerful empresses Julia Domna and Julia Mamaea seems to have influenced him to record facts relating to the power and rank of earlier empresses, which other historians disregard; e.g. The tribunician privileges of Livia and Octavia (Dion Cassius, XLIX, 38); Livia's 'Suasoria on Clemency' (*ibid.* LV, 13); Livia at the funerals of Drusus and Augustus (*ibid.* LV, 2, 8; XLIX, 15; LVI, 47); Insult to Livia a violation of *maiestas* (*ibid.* LVII, 19, etc.); Livia did not enter the 'Camp,' or the senate house, etc. (*ibid.* 12, 3).

guard. Thirty inscriptions are on public works or statues erected by towns, fifteen of them in the African provinces. Twenty-one inscriptions are dedications by priests, ten being erected on entrance to a priesthood to which it is possible the dedicator was nominated through the favor of the Empress or the imperial family; two of this class were dedicated by the priestess of a colony. Seven dedications were made by private citizens, four by servants of the imperial family or of Plautianus, and two by corporations, not already mentioned, — the “Sailors of the Danube,” and the “Merchants and Money Changers of the Forum Boarum.”

Dedications by towns and by the army were more often made directly to the members of the imperial family, while other dedications were made to some divinity on their behalf.

MARY GILMORE WILLIAMS.

MT. HOLYOKE COLLEGE.

American School
of Classical Studies
at Athens

AN ANCIENT FOUNTAIN IN THE AGORA AT
CORINTH

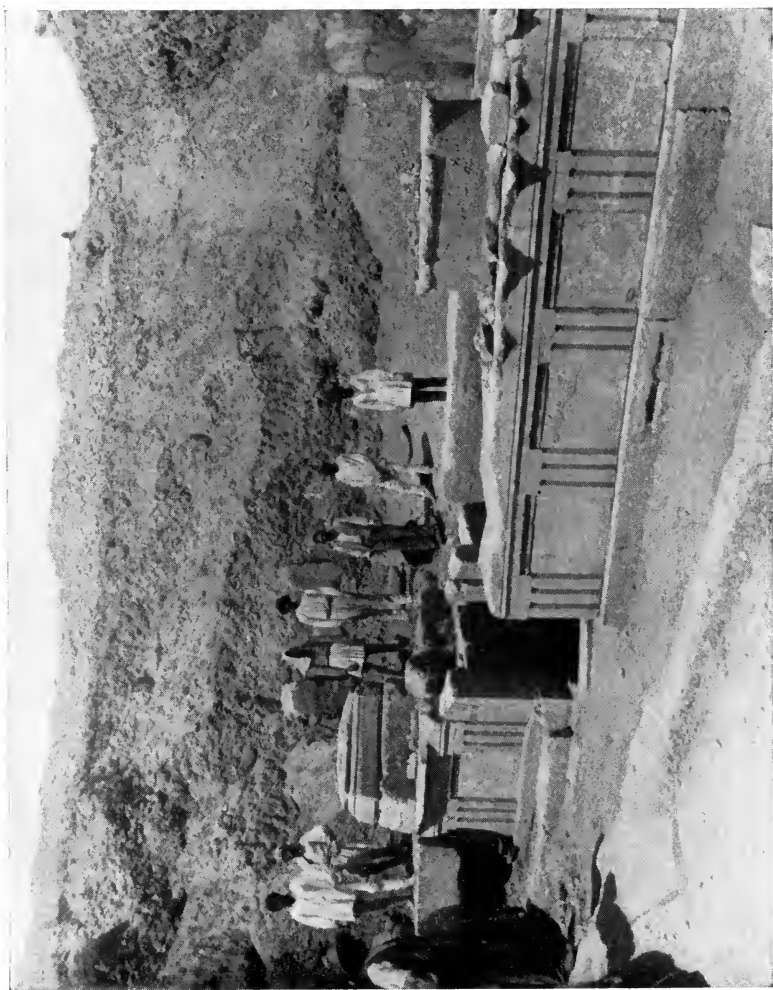
[PLATES VII-X]

THE ancient fountain discovered in the excavations of 1900 inside the Agora of Corinth, about twenty-five metres west of the west end of the Propylaea, and briefly noticed in the Director's Report of that year (*Am. J. Arch.* 1900, Suppl. p. 24), could not at that time be adequately described, inasmuch as a portion of it still remained unexcavated. Now that the excavation of it is completed, it deserves a full description. Not only on account of its peculiar structure, but also on account of its good preservation, it takes its place alongside of the fountain Pirene and the temple of Apollo as one of the most interesting monuments of the old city.

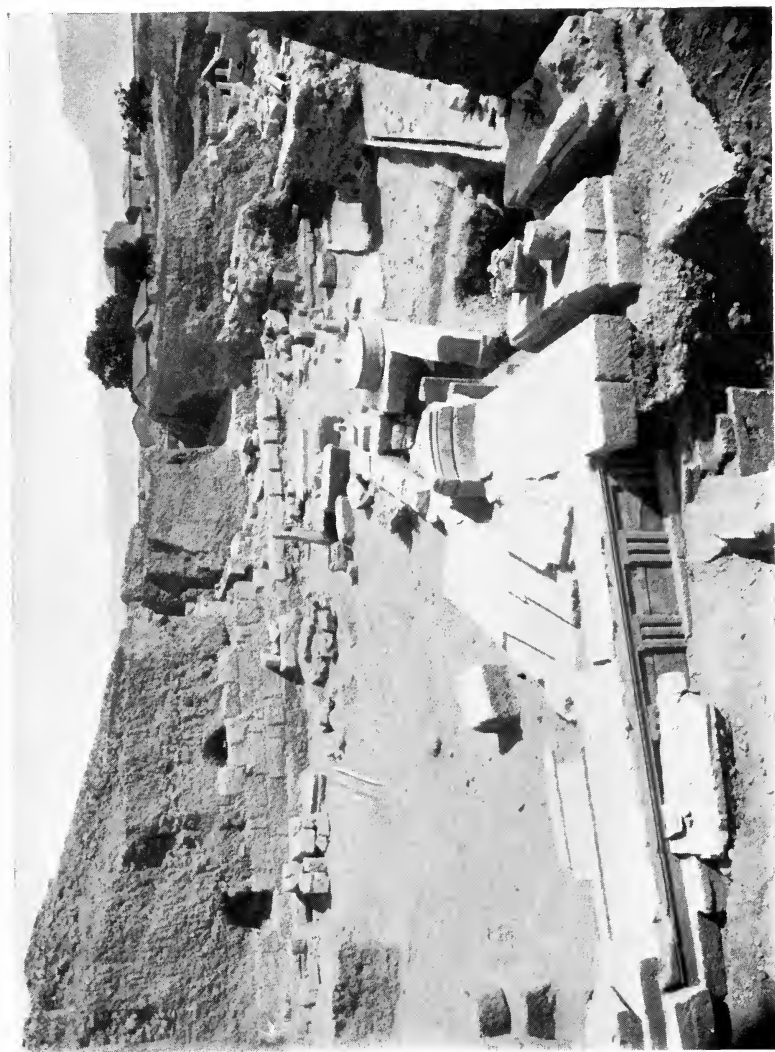
It consists of two parts, the fountain proper, and a Doric frieze of metopes and triglyphs enclosing it; the latter, being the part that first meets the eye, may properly stand first in the order of presentation. Its ground plan is shown in Fig. 1.¹

PLATE VII gives a view of the east side, PLATE VIII a view from a point above it from the south. Figure 2, drawn by Alexander Lykakes, architect of the Greek Archaeological Society, gives the elevation and profile of the triglyphon. The system consists of a long east front and a shorter south front. The former does not run exactly north and south, but from east of north to west of south, and joins the south side at an obtuse angle. Its line is broken, the middle portion being projected

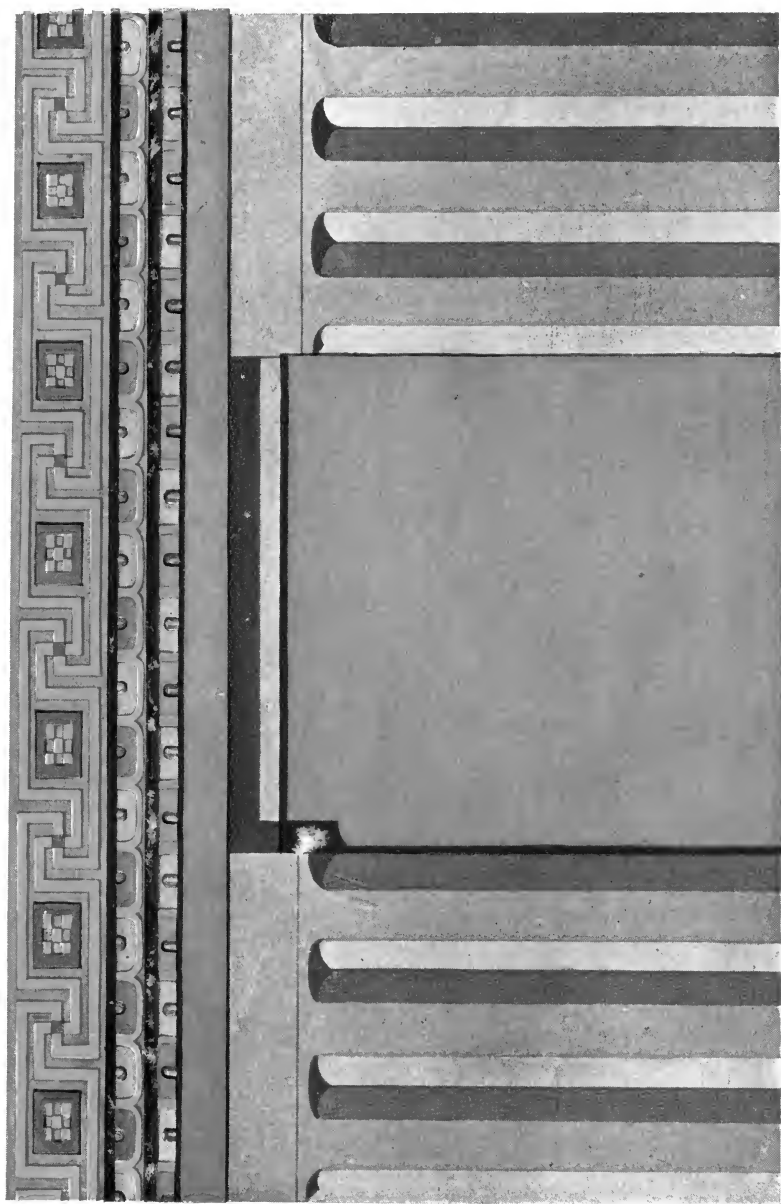
¹ All the drawings of the fountain, unless it is otherwise stated, were made by Mr. Benjamin Powell, Fellow of the American School at Athens.



ANCIENT FOUNTAIN AT CORINTH: VIEW OF THE EASTERN SIDE

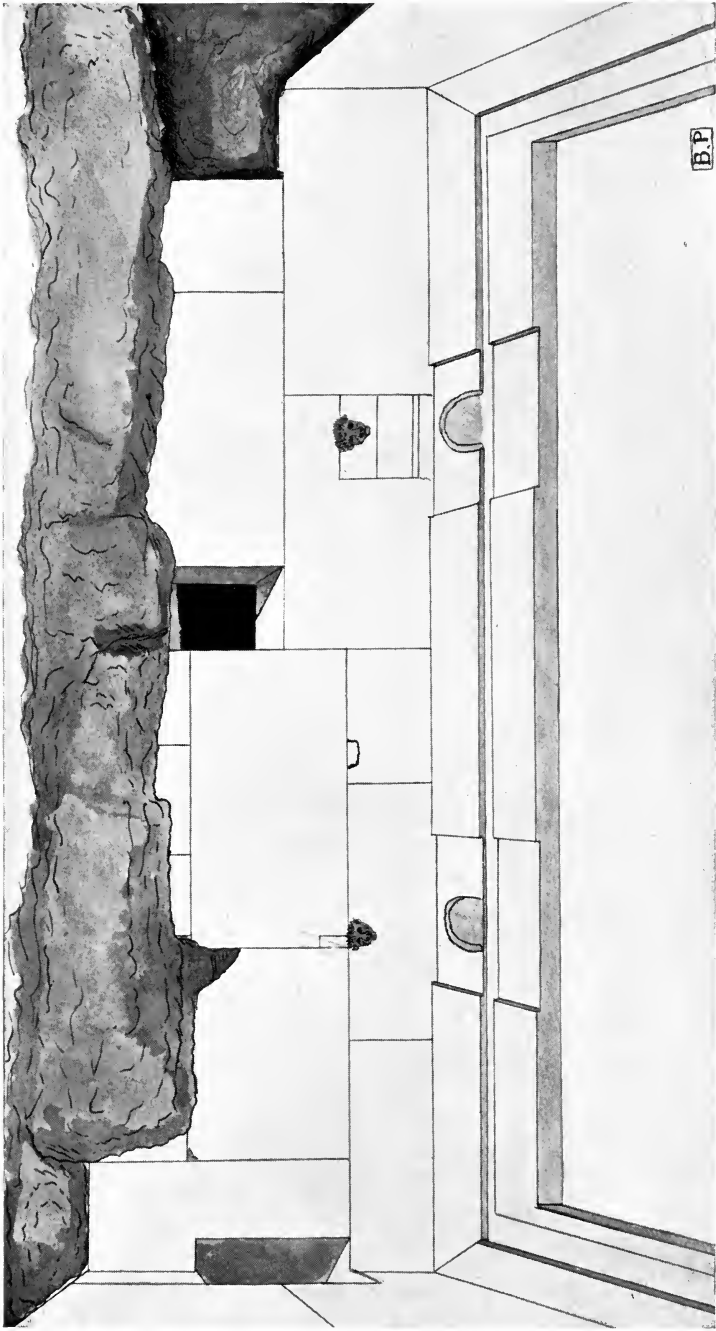


ANCIENT FOUNTAIN AT CORINTH: VIEW FROM THE SOUTH



ANCIENT FOUNTAIN AT CORINTH: COLORS OF THE TRIGLYPHON





ANCIENT FOUNTAIN AT CORINTH: ELEVATION OF INTERIOR

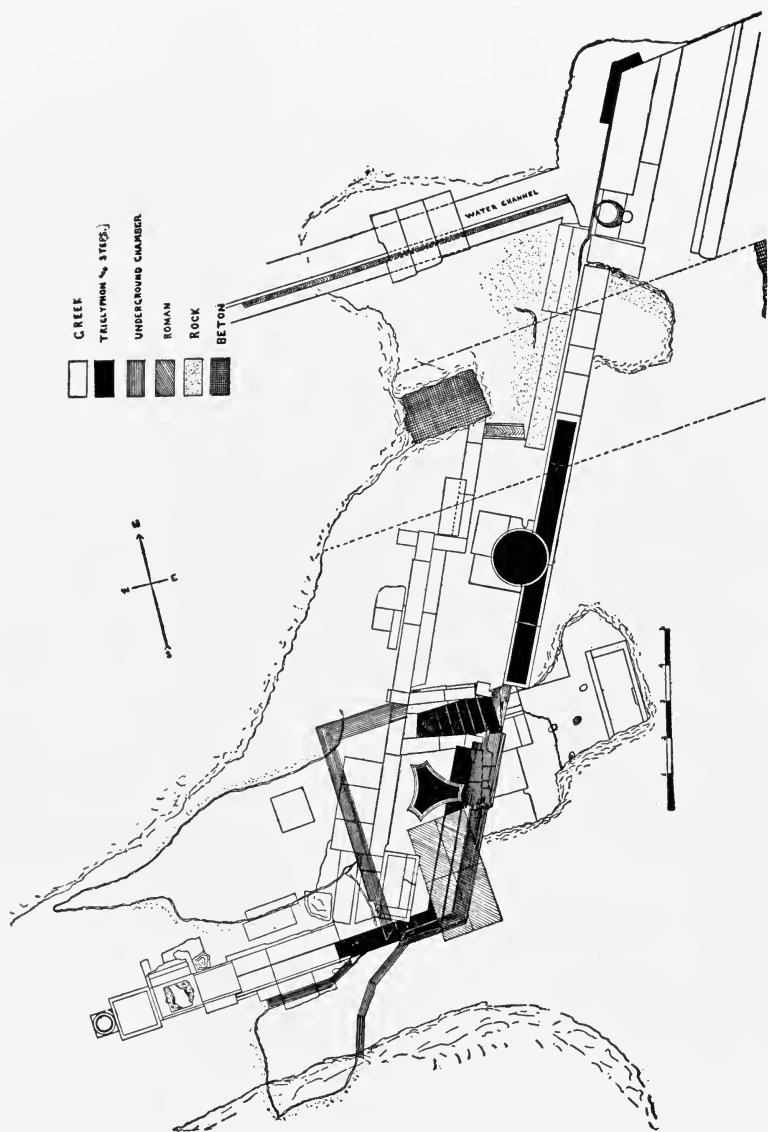


FIGURE 1.—ANCIENT FOUNTAIN AT CORINTH: GROUND PLAN.

somewhat to the front. Of the northern part a good deal is lacking. The last block to the north has smaller dimensions than the rest of the system; and being separated from the rest by quite an interval, leaves an opportunity for conjecture about the destruction and restoration of this part;¹ and where the system at the north end of this block takes a turn in a more easterly direction it consists of a plain block set on edge. With these exceptions the system is in an admirable state of preservation, even to the stucco and the paint upon it. On the south side, which must have been first covered up by the earth, the preservation of the paint is most perfect.

Behind the triglyphon a platform was constructed on a level with the top of it, with an extension to the rear which made it reach to the soft rock, which here rises to the surface, as its support. On this platform now stand two bases, one round and the other triangular with truncated angles, extending forward over the top of the triglyphon itself nearly to its front edge, and apparently forming a part of the system to which the triglyphon formed an ornamental front. Farther south is a quadrangular base in alignment with the east front, but of course out of line with the south front which it approaches. Toward the north end the platform is broken away along with the triglyphon. North of the door to be described later the only part of it that remains is what was apparently held in position by the round base; but it can hardly be doubtful that it was once continuous up to the north end.²

The material of the triglyphon, like that of the platform and the bases, is a very soft, friable, porous stone, like that which constitutes the mass of the Isthmus of Corinth. From the nature of the material the coping, which projected 0.09 m. to the front

¹ It is worth noting that the triglyphs of this last block have just the distances which fit the intercolumniation between two Doric columns that were found in the very last days of the work on a slender stylobate, apparently of a porch, about ten metres to the west, up against the temple hill.

² It is not unlikely that disturbances in this quarter were caused by the laying of the rubble foundations of a porch which extended westward from the Propylaea across the fountain and somewhat farther to the west.

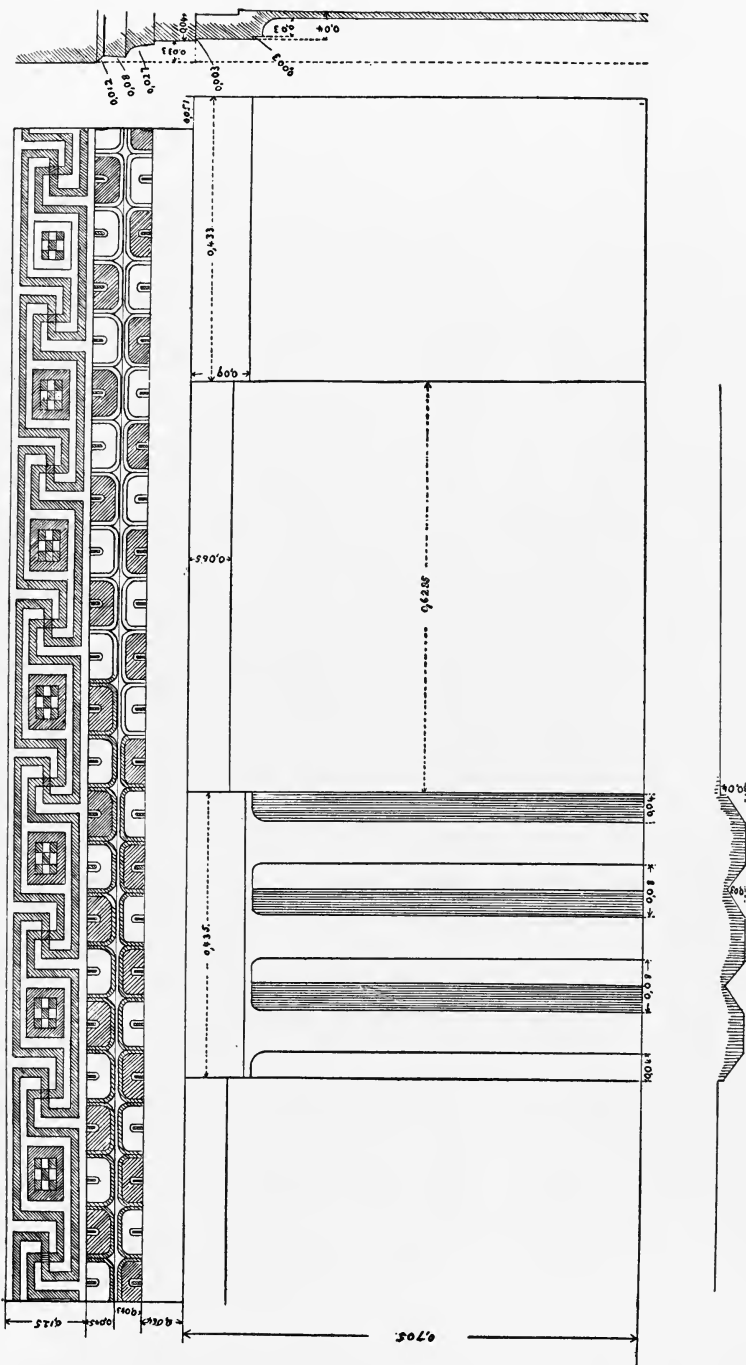


FIGURE 2. — ANCIENT FOUNTAIN AT CORINTH: ELEVATION AND PROFILE OF THE TRIGLYPH.

of the band over the metopes and triglyphs, has been much broken away, some of it during the excavations, in spite of our efforts to preserve it. North of the door for a distance of about 1.50 m. the surface of the triglyphon has been worn away to a depth of half a foot or so, probably by people passing over it when it was partially exposed.

On its south face the triglyphon ends at a distance of 4.78 m. from the southeast corner, and is succeeded by one block which continues the upper part of the unpainted moulding of the block above the metopes and triglyphs, while these are lacking. Then succeeds a course of plain stone, in the top of which another course now partially lacking was bedded. In this upper course, so far as it is preserved, is a continuous bedding for something else, presumably a statue base or bases. Next follows a square base, then a plain unfluted column, its lower part consisting of a round base without moulding. These are all of the same material as the bases along the east front. With the column the system comes to an end; but the line is taken up and continued much farther to the west by a series of quadrangular bases of evidently later date, and in no organic connection with the fountain façade.

In the triglyphon (see PLATE IX, from a reproduction by A. Lykakes) the colors are distributed according to the usual laws of ornamentation of Doric temples. These colors are red, blue, and yellow. The triglyphs are blue, and the metopes red; the low band at the top of each of the metopes is blue, to separate the red field of the metopes from the continuous red band above. On these parts the color is practically obliterated; but that of the moulded band at the top, being longer protected from the influence of the weather by the coping, was at the time of the uncovering distinct in every detail. On the two narrow mouldings below, the arrangement of the red and the blue godroons is exactly that which appears in Fenger, *Dorische Polychromie*, Tafel 7, which includes the Parthenon, the Theseum, and the Propylaea of Athens, the two temples at Rhamnus, the temple of Sunium, and the Hera

temple at Selinus. On the lower of these two mouldings, which is concave, the blue godroons are under red ones in the upper band, which is plain but projects forward at the bottom. On the broader top moulding the double maeander of yellow deploys itself in a blue field around red squares with smaller squares of blue and yellow included in them. Little squares of red are inserted at the crossings of the lines of the two maeanders.

When this system was intact, colored with exquisite taste, and appropriate to a series of statues, it must have been very beautiful. But after all it was but a frame for something else.

Through a break in the eastern façade of the triglyphon there is an approach by a flight of seven steps to a room trapezoidal in shape, the floor of which is about 2 m. below the top step. (See Fig. 3, for the ground plan, and PLATE X, for the elevation and perspective.) The steps descend along the north wall of the room. The west wall of the room serves as a support for the edge of a stratum of conglomerate rock similar to that which appears in Pirene¹ supported by cross walls. But it also serves as a fountain façade. Two lions' heads of bronze are affixed to it, through which water once flowed. Along this façade and the sides adjacent to it is a raised band about 0.15 m. higher than the rest of the stone floor of the room. In this is cut a groove for carrying off the water, at an interval of 0.31 m. from the wall. Along the façade it is only 0.12 m. broad, but along the adjacent sides of the room it has a breadth of 0.30 m. Where the groove passes under the lions' heads, semicircular cuttings are made at the sides of the groove to complete a circular hollow for holding the pitchers while they were filling. The gutters along the side walls pass to the front underneath the wall which closes the room to the front. The space back of the façade wall is approachable through two openings. Here one can trace back under the conglomerate stratum for nearly thirty feet the semicylindrical open grooves lined with

¹ *Am. J. Arch.* IV (1900), p. 208.

bronze, through which the water was conducted to the lions' heads. Figure 3 will make clear this arrangement.¹

It is obvious that there must have been a time when the fountain was once open to approach at this lower level, and that the surplus water flowed off on the surface. The massive irregularly built wall, which runs obliquely across the once square floor, was clearly built at some later time as a support for the triglyphon, which here had to cross a void, while north of the door it rested on beaten earth and the ledge. Excavation in front of the wall revealed the floor continuing forward a little way, but being then irregularly broken at the front edge. There can be no doubt that it once continued about a metre and a half farther, to the edge of the reservoir (see Plan, Fig. 1), which itself probably had a discharge pipe by means of which the water could be used farther down, or simply conducted off. The reservoir is 1.00 m. deep and 1.00 m. broad. Its length it is impossible to determine, as at a distance of about 2.50 m. from its north end it runs under a line of bases which we did not wish to disturb. Its walls are composed of single blocks of poros placed on their edges (*orthostatae*) and lined with fine stucco. The blocks of the west wall are lacking, but the cutting for them plainly appears in the hard white clay which we reached at a depth of 10 m. below the surface of to-day, and which we hailed with delight as virgin soil.²

All the space excavated in front of the front wall of the room had been filled in with hard earth which contained very few fragments of ancient objects of any kind. What became of the fountain when this filling was done, it is difficult to see. We

¹ Between the two lions' heads now preserved, but considerably nearer to the southern one, there was doubtless once another, to which a southern branch of the northern channel is seen to have led. The façade shows a piece of stone inserted here to fill the orifice once filled by the lion's head.

² The tall column of earth left standing near at hand, and called in modern Greek *μάρτυρα*, is an eloquent "witness" to the labor which it has required to get down to this ancient level. The heights are as follows: from the surface down the top of the triglyphon, 5.50 m.; from the top of the triglyphon down to the floor of the room, 3.50 m.; from this floor down to the bottom of the reservoir, 1.00 m.

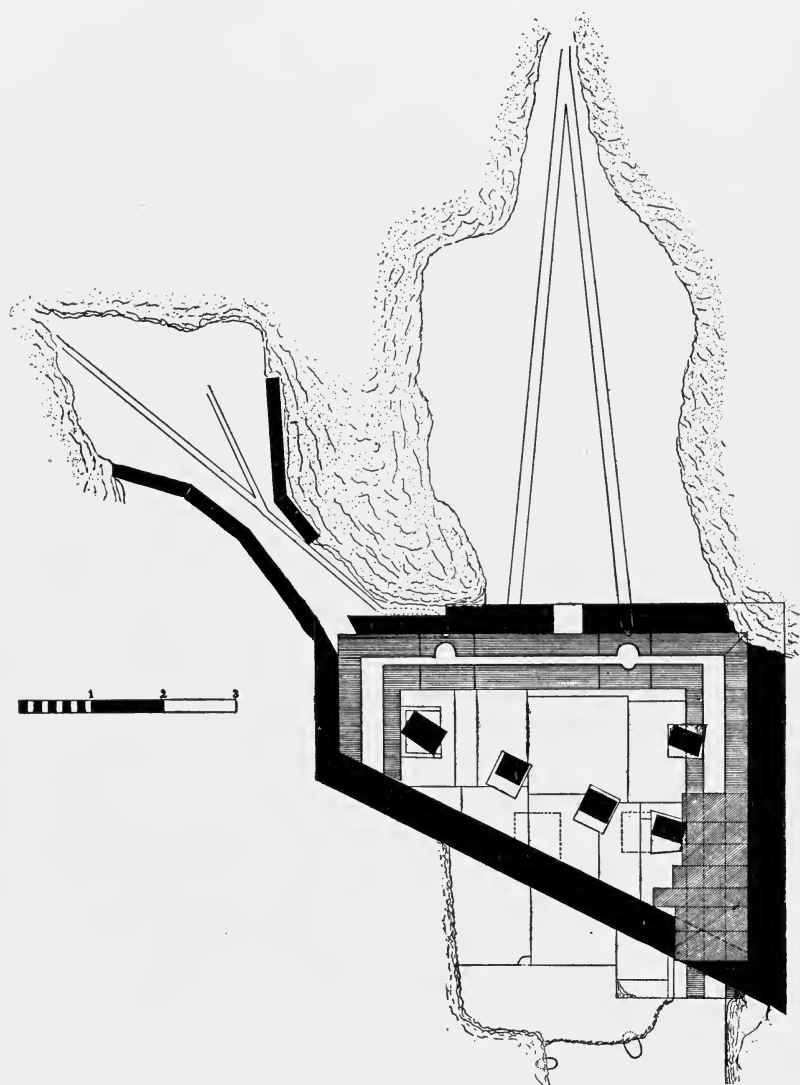


FIGURE 3. — ANCIENT FOUNTAIN: GROUND PLAN OF EARLIER PORTION.

have discovered no provision for conducting off the water under this eight feet of earth; and yet the flight of steps shows that pains were taken to make the fountain still accessible after the level was raised. Any occasion for discarding or changing the fountain can be discovered only approximately. On the floor, besides the five irregularly placed supports for the top, there are traces of beddings for two other supports in a line parallel to the façade with the lions' heads. A third, if it existed, would now be covered by the oblique wall; but it is almost demanded, to make a symmetrical arrangement. It is not improbable that the conglomerate stratum here once extended farther to the front, as it does a little farther to the north; and that the side walls with these three pillars formed a façade not unlike that of Glauce,¹ only with smaller proportions. The projecting stratum may have fallen in by its own weight assisted by an earthquake. In fact the very jagged edge of the part now remaining lends some color to this hypothesis.² The remodeling thus demanded brought with it perhaps not merely the providing a new covering, but the irregularly placed pillars and the front wall to support it. So much being done, an approach to the fountain would have to be made over the wall; and to save the labor of mounting, one may have conceived the idea of filling up in front, a procedure all the more rational if, as one may suppose, a good deal of earth had already begun to accumulate around the front of the fountain from the higher slopes back of it. And then came the triglyphon to keep the whole system from being hidden in the earth, and to hide the shapeless ledge by its extensions to the north and to the west.

We may now discuss the date of the two adjustments; and here lies one chief interest of the fountain. In the brief report, already alluded to, I spoke of the triglyphon as having been put together, at the time of the Roman rebuilding of Cor-

¹ *Am. Jour. Arch.* IV (1900), p. 463.

² The ledge made a very low ceiling for the room, 1.45 m. above the floor. The women must have been obliged to bend over a good deal in filling their pitchers. Visitors who now stoop down to inspect the lions' heads are apt on rising to hit their heads against the ledge.

inth, from ancient Greek buildings then lying in ruins. I am now convinced that it is much older, and that the blocks of which it is composed were made for this very use and none other. My former assumption that the Doric triglyphon was used only in the entablature of buildings must give way before certain considerations, even if they lead us to a unicum in architecture.

The general impression produced on one at first glance, that he stands before a Greek structure, needs some tangible evidence before it can become hardened into a conviction. My conviction rests upon the following pieces of evidence :

(1) Although the metopes and triglyphs and the first continuous band above them look as if they might well have come from some temple, yet since the latter is simply the lowest moulding on a block that contains not only the broad moulding with the maeander pattern but also the coping, this whole top part could not by any possibility have come from a temple or any similar building.

(2) The maeander runs consecutively across the joints, which are carefully made, and so must have been painted on the blocks when they were in their present position. It is in the highest degree improbable that this example of the best architectural polychromy should have been painted in the Roman city where, as far as we can now discover, the fine old traditions of Doric polychromy were discarded. It points rather, as is shown by the examples cited on p. 310, to the fifth century B.C.

(3) The structure of the southeast corner alone excludes the idea of borrowing from other buildings. Here in spite of the base of later times which has been set into the system, enough of the corner is still seen to show that it is made of a single block with two contiguous triglyphs, one on each face. And this block was cut to fit the obtuse angle. One can hardly suppose that any other building existed in this neighborhood, with an obtuse angle at one of its corners!

(4) At one part of the east front, where the top block has been broken away, two of the triglyph blocks are seen to be

held together by a clamp of the form Γ , a form which is rarely used in Greece after the Persian War, and never after the fifth century B.C.¹

(5) On the top of the triglyphon along the south front, as was said before, there is a continuous cutting for bedding another course, and in this course, where it is preserved, is another cutting apparently for bedding statue-bases. In the latter was found a base of black marble bearing the inscription $\Lambda\Upsilon\Xi\text{ΙΠΡΟ}\Sigma\text{ ΕΠ.}^2$

If any inference at all can be drawn from this base, it makes the triglyphon at least as old as the fourth century B.C.

(6) The difference between the connected system of bases marked on the plan as Greek, all made of soft poros stone, and all adjusted to the lines of the triglyphon, and the other bases to the east and west of the system, is so striking that one would have to use violence to bring them all into the same epoch. The obvious conclusion is that the *system* is Greek and that the *adjacent bases* are Roman.

(7) The massive base roughly let into the southeast corner of the triglyphon, destroying a part of it and hiding a much larger part, is simply the most westerly of a series of four bases rising to the same level. This complete disregard, almost contempt, of the triglyphon could not have been exhibited by the new settlers if they had already taken the pains to put it together. The inference is that the Romans placed the base, but found the triglyphon already existing and probably pretty well covered with earth.

¹ It is true that the clamp is made of lead only, without iron, which might suggest that we have here a trace of refitting, in which an old dowel hole was filled by simply pouring lead into it as a makeshift. But lead was perfectly adequate to meet any strain that might come upon this joint.

² It is true that the base was found lying bottom side upward in the cutting, and does not fill the whole cutting, but leaves a gap of 0.03 m. on each side; but as a thick layer of lead was found covering the bottom of the cutting, it seems likely that the base was really bedded there. Another poros base was found about 8 m. farther west at a much higher level, built into a wall, bearing the inscription $\Lambda\Upsilon\Xi\text{ΙΠΡΟ}\Sigma\text{ ΕΡΟΗ}\Sigma\text{Ε.}$ It seems clear from this that the great artist of the neighboring city found occupation here.

We have in a measure arrived at clearness in regard to three different levels in this quarter: a Byzantine level marked by a pavement of rather poor white marble, with some plaques which appear to be limestone, passing about a metre over the top of the triglyphon; a Roman level flush with the top of it; and a Greek level even with the bottom of it. This last rises in the rear of the fountain so rapidly that it there coincides with the Roman level a few paces to the west;¹ and all three

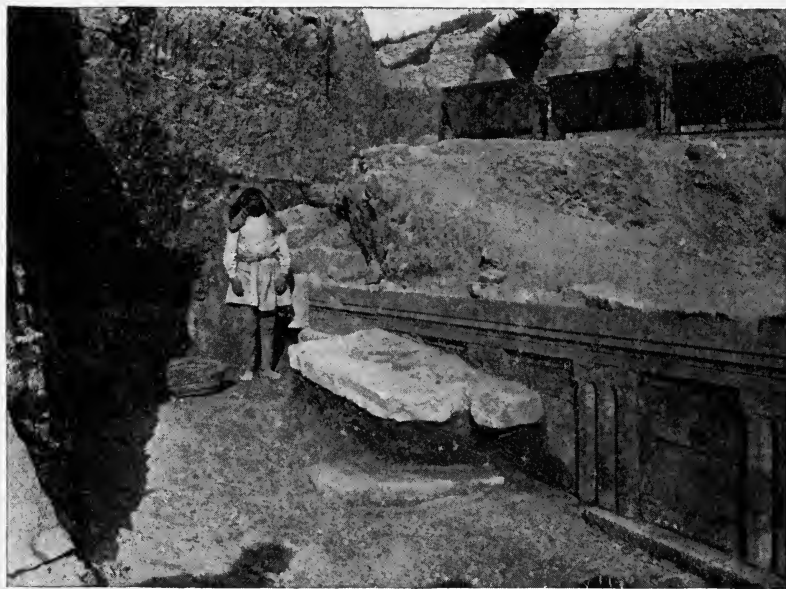


FIGURE 4. — LIMESTONE PLAQUE IN FRONT OF SOUTH FACE OF TRIGLYPHON.

levels coincide at the end of the excavation area of 1901, which is bounded by a line passing along the east end of the church of St. John Theologos and cutting the temple of Apollo a little

¹ Fig. 4 shows a large limestone plaque ascending along the south face of the triglyphon. Another similar plaque which was joined to it to the east was removed before we saw the significance of it. The two plaques formed part of a pavement, probably a street, the ascending line of which is marked by the working of the bases along the line. Under the plaque that was removed we found a silver Corinthian didrachma, apparently of the fifth century B.C., a corroboration, if one were needed, that the pavement is Greek.

to the west of the middle. The gradual approach of the Byzantine and the Roman levels may be seen in the high bank bordering the excavation area on the south. That the levelling-up in front of the front wall of the fountain chamber was done in Greek times, and not later, is shown by the character of the filling in front of the wall which closes the fountain room at the front. A few centimetres below the bottom of the triglyphon, just around the southeast corner, was found the handle of a vase with ΕΥΚΛΕ scratched upon it in letters of rather archaic appearance, especially the slanting epsilons. Another vase fragment found along the east front at a slightly lower level — a piece of a red-figured cylix showing a discobolus in the act of hurling his discus — cannot be later than the fourth century, and is probably earlier. These indications that the filling dates from Greek times are not confronted by any rebuttal in the other scanty finds therein.

That the Roman level was at the *top* of the triglyphon is shown by the level of the line of bases coming toward it from the east, the last one of which is cut into it. But this proof receives two interesting corroborations: first, in the fact that the triglyphon is so worn away at the top, especially at the north of the door, and, secondly, in the fact that the triangular base with truncated ends protruded in Roman times above the earth so much that some one found an occasion to cut in it the Latin letters NER.

If now, waiving any argument from the 4-formed clamp as to an earlier date, we stand upon the proofs that the triglyphon was as early as the times of Lysippus, the much greater depth of the façade with the lions' heads seems to imply a much earlier date. One can hardly think of the interval between the two which had brought about such a change of level as less than a century; and this would put the fountain itself back well into the fifth century B.C. It probably does go back to the very beginning of that century, and perhaps into the beginning of the sixth. Professor Furtwängler, in a casual view of the lions' heads, judged them from their style to belong to the

beginning of the fifth century or the end of the sixth. They are somewhat corroded and battered, and it has been difficult to procure good photographs of them from the original, owing to the defective light. But that given in Fig. 5, taken from a cast, conveys some idea of their rather archaic style, which enables us, without striving to find an ancient date for them, still to regard them, and with them the whole fountain, as a monument of the times before the Persian War.¹

It is a wonderful chance that has preserved this ancient Greek fountain intact down to our day. It is, be it remembered, the only case of the kind. Pirene has been Romanized; Glaucé has been destroyed; and one fate or the other has overtaken all other Greek fountains. It is difficult to explain how this came to be spared. Even the building up of the triglyphon around it seems to imply a practical abandonment of it in Greek times, inasmuch as it seems impossible for the water to have found an outflow when the level around the fountain was raised; yet it was somehow spared.² During the period of a hundred years, when the city



FIGURE 5. — LION'S HEAD FROM THE ANCIENT FOUNTAIN.

¹ They appear to vary more from each other than they really do, from the fact that one is thrust much farther into the wall than the other. The main difference is that one has larger eyes than the other. The size of both is about the same, if we take the distance from the roots of the mane to the tip of the lower jaw as a criterion. This measures in both 0.15 m.

² The lowest stone of the wall which crosses the northern channel of the floor of the fountain room does not quite prevent the escape of water; the southern one we have not been able to investigate. It is interesting to note that the accumulation of a lime deposit on the wall under the lions' mouths indicates that at some time the water ceased to come out with force, and only trickled down.

is said to have lain waste, the earth would naturally accumulate as high as the top of the triglyphon. But when the Romans rebuilt the city and placed the bases before mentioned, it seems incredible that they should not have found the opening into the lower level. Apparently it was the feet of that generation that wore away so much of the top of the coping near the door. The slightest inquisitiveness would have led them to find the staircase. We found it closed by a row of poros blocks about 0.15 m. thick, laid across the whole opening and level with the top step. A natural explanation of their presence is that the Romans placed them there to stop up the hole; and if they did so, it is a wonder that they let the lions' heads remain in the darkness of midnight rather than transport them to the Roman market or apply them to some new fountain. They were surely worth cutting out; but they remain.

When the later plunderers, barbarians of whatever race they might be, and when the Byzantines of the generation that thought to improve the Roman façade of Pirene, came upon the stage, this fountain was already deep under ground and safe from everybody except the modern archaeologist.

RUFUS B. RICHARDSON.

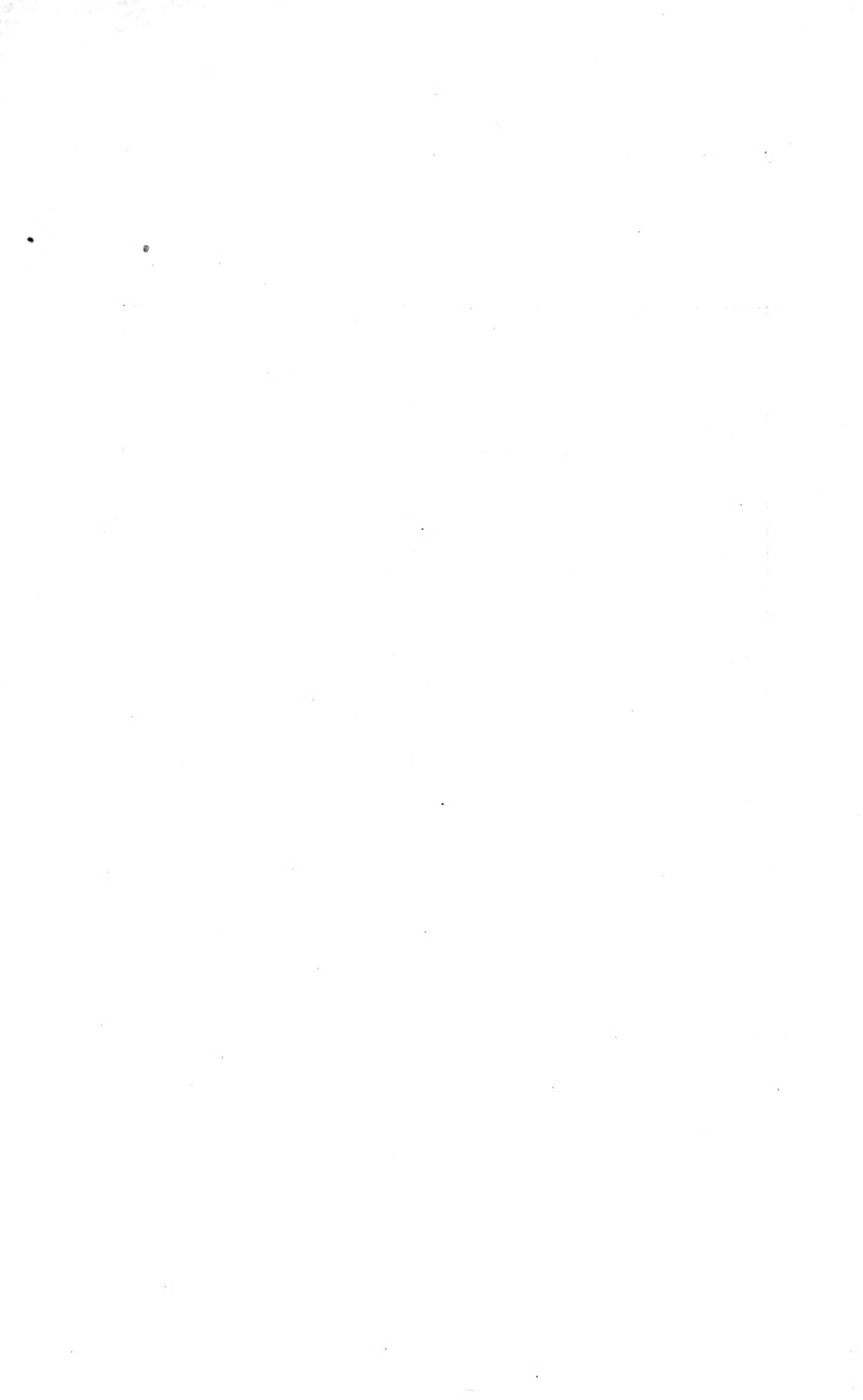
ATHENS,
June 11, 1901.



PIRENE IN 1901: GROUND PLAN OF QUADRANGULAR BASIN



PIRENE IN 1901: QUADRANGULAR BASIN



THE ΤΗΛΙΘΡΟΣ ΚΡΗΝΗ OF PIRENE

[PLATES XI, XII]

THE following article is intended as a supplement to the two which appeared in this *Journal* in 1900, Vol. IV, pp. 204 ff., and is evoked by the fact that in the spring of 1901 further excavations were made in the quadrangle in front of the façade of Pirene.

At the time of the publication of the above-mentioned articles there was a round basin in the middle of the quadrangle. But it had always appeared unlikely that this was the basin referred to by Pausanias as an open-air basin into which the water flowed. Water could hardly be said to *flow* into it, inasmuch as it was simply a depression about 1 m. deep in a mass of solid masonry covered with a marble floor. Water did somehow find its way into it through an irregular break in the bottom of the surrounding masonry, as well as through a gutter cut in the floor. But still it remained doubtful whether Pausanias would apply the word flow (ῥέει) to such an oozing through as this. The straight gutter which appeared near the western edge of the basin and passed right through it, seemed to belong not to it, but to some previous arrangement. It was this gutter, then, which led us to break up the pavement around the round basin, in the hope of finding an older quadrangular basin.

We began in front of the Byzantine columns, and immediately found the same sort of a gutter running at right angles to the other one, close to a wall running east and west, about 1 m. high, and faced with marble. Proceeding westward along

this face, we soon found the southwest corner where the gutter made its rectangular turn. At this point we had proof enough of the existence of the rectangular basin. But we proceeded to draw out all the filling between the walls of the square basin and the round basin, a process by which, of course, the latter disappeared. It was a most laborious process; the filling was composed of architectural pieces, among which were many fragments of Doric columns, bonded by a cement much harder and tougher than the blocks of stone. The mass gave way only under the constant application of dynamite.

The form of the basin which came out is shown on the new plan drawn by Mr. B. Powell (PLATE XI).¹ The accompanying scale (in metres) makes it unnecessary to give many measurements in figures. PLATE XII supplements the plan.

At the southern end water was discharged into this basin through two round holes near the top, placed symmetrically in front of the middle of each of the two middle chambers of Pirene. The water, in passing from these chambers into the basin, traverses another very shallow and rather narrow basin stretched out in front of these two chambers. The two holes are pierced in the thin wall which separates the two basins. The outflow was through an orifice at the bottom of the basin, on the north side near the northeast corner. The gutter which runs all around the basin is broken at this point by a side branch which runs into the orifice.² The flow was no doubt into the broad and deep conduit running east and west about 2 m. north of the basin, and partly excavated in 1898. We have, then, a complete and intelligible system of supply and discharge.

¹ This plan has made some slight corrections of the old one, *Am. J. Arch.* IV (1900), p. 228, notably at the west end of the system of chambers. It is also made to include a little of the court of a Roman building north of Pirene.

² On either side of the side branch, and running across the main line, were two moulded marble blocks with the moulded sides turned outward (see PLATE XII). These probably belonged to the discharge system of the round basin. Traces were found of a roughly cut gutter, partly in the marble floor and partly in the filling above it, which ran from below a rude hole, between the two already mentioned, in the front wall of the shallow basin through the round basin to this orifice.

The basin is floored with marble, with the exception of the blocks in which the gutter was cut, which are of white limestone. The sides also had marble coating; and since the floor of the quadrangle, the façade of Pirene, and the walls of the apex were all covered with marble, the whole quadrangle was *one marble magnificence* suited to please even Herodes Atticus, to whom it quite probably owed its existence.¹ A flight of four marble-covered steps led down from the quadrangle into the basin on its north side.

The most striking feature of the basin is its lack of symmetry in itself and in its location in the quadrangle. For example, its breadth at the north end is 0.50 m. greater than at the south end, and the length of the west side exceeds that of the east side by nearly as much. The flight of steps, too, comes nearer the east side than the west side by 0.30 m. These seem tokens of an intended asymmetry. The basin is not square with the fountain façade, as one would expect it to be. The only side of it which is practically parallel to the side of the quadrangle next to it is the east side. It was just this side which gave such a lack of symmetry to the quadrangle itself (*Am. J. Arch.* IV [1900], p. 229).²

The question might still be raised whether this is the basin referred to by Pausanias, inasmuch as we have another basin, already mentioned, running along the façade. This question can hardly be answered without first settling a preliminary question, viz., whether this sunken square with which we are dealing was really a tank, intended to be filled with water.

Two considerations seem to indicate that it was not filled. In the first place, the floor, especially along the gutter at the foot of the steps, is much worn away as if by feet; secondly, the same wearing appears under the holes through which water flowed into it. These two considerations, however, would only

¹ *Am. J. Arch.* IV (1900), p. 236.

² The round basin also, curiously enough, was not symmetrically placed in the square one; its centre was so much to west of the axis of the latter that the eastern gutter did not appear at all before the round basin was broken up.

show that it was *sometimes* empty, and would fall short of proving that it was never filled.

It was always easy to fill it by stopping up the orifice in the northeast corner; and if it were not meant to be filled, why should it exist? It would seem more rational in that case to have the whole quadrangle at the lower level, to facilitate the movement of the crowds. Is it not more likely that it was sometimes filled and sometimes empty?

Now if this was the case, the basin seems to meet in a rather striking way the requirements of the description of Pausanias, who says: "The water flows out of the covered chambers into an open-air basin. It is pleasant to drink; and they say that the Corinthian bronze, when it is red hot, is dipped in this water."¹ Pausanias is clearly speaking of two uses of the water after it flowed into the basin.

It may seem a little difficult to reconcile these two uses. One would naturally prefer to have the blacksmith's work done in a different tank from that out of which one gets his drinking water. To reconcile the contradiction, it is here put forth as a hypothesis which may not seem unreasonable, that the tank was filled when the water was used for dipping bronze, and that it was emptied when it was not so needed, that the pitchers might be brought to the spouts and be filled. There might be some difficulty in adjusting the hours. But if the Corinthians really found that this water had an almost marvellous property which gave ordinary bronze, when dipped in it, a quality which stamped it throughout the world as Corinthian bronze, the women might well be given to understand that at certain times they must go elsewhere to fill their pitchers. The chambers, near at hand, were in all probability in their original use reservoirs out of which water was drawn, and must always have been available for that purpose. Even if Pausanias was entirely wrong about the property of the water, he must have seen a body of water in which dipping would be possible. The

¹ Paus. II, 3, 3: ἐξ ὧν τὸ ὕδωρ ἐς κρήνην ὑπαιθρον ῥεῖ, πιεῖν τε ἡδύ, καὶ τὸ Κορίνθιον χαλκὸν διάπυρον καὶ θερμὸν ὄντα ὑπὸ ὕδατος τούτου βάπτεσθαι λέγουσιν.

use of the upper, shallow tank for this purpose, while pitchers were being filled at the spouts issuing from it, is not likely to occur to anybody.

On the east and west walls of the tank in the marble facing, near the top, are two pairs of round holes, one about 0.15 m. above the other, of the same size as those in the south wall. Those on the east wall are 1.45 m., and those on the west wall 2.08 m. distant from the south end of the basin. I incline to regard the bottom holes as overflow apertures, introduced that the water might not rise over the level of the delivery pipes or overflow the floor of the quadrangle when the orifice in the northeast corner was stopped up. The top holes, being at the same level as the other delivery openings, were probably also made for the same purpose, although there are no traces of pipes near them which could have served to bring or carry off water.¹

That the quadrangular basin is Roman, and not Byzantine, is sufficiently attested by the recurrence of the semicylindrical gutter cut in blocks of the same white limestone which we have both in the pavement of the street leading out of the Agora toward Lechaeum and in a court of Roman times just north of Pirene, which appears on our plan (PLATE XI).

The round basin, however, probably dates from Byzantine times. Possibly a round form was thought to harmonize better with the semicircular apses on three sides of it.

In conclusion, this is the fitting place to note that the stucco of very fine grain which covers the lower part of the side walls of the chambers of Pirene has considerable paint preserved upon it. The surface is painted blue; but about halfway between the top and bottom a stripe of red 0.04 m. broad runs

¹ It is possible that the shallow basin once extended along the whole front of Pirene, and that pipes did carry water from its eastern and western parts to these upper holes. At present only two small shallow basins are seen at the west end in the floor of the diminutive Byzantine church which occupied the southwest corner of the quadrangle. Investigation near the east end of the façade is made difficult by the present arrangement for conducting water to the village square.

along the sides. In the corners another red stripe runs up and down.

One also sees at just the level of the top of the front parapet a raised band along the side walls, made by the accretion deposited by the water upon the stucco. By the slight variations in the height of the water, the band, which is about 0.03 m. in width, is divided into six or seven little bands.

RUFUS B. RICHARDSON.

ATHENS,
June 27, 1901.

THE ORIGIN OF THE RED-FIGURED TECHNIQUE IN ATTIC VASES¹

THE Museum of Palermo possesses a cylix of peculiar value aside from the fact that it bears the signature of Andocides; for among all the Greek vases which have as yet been found, it is unique in this respect, that it combines the black-figured with the red-figured technique *on the outside* of the same cylix, whereas it is usual among cylixes that show the mixed technique to have the interior in the black- and the exterior in the red-figured technique.²

¹ I wish to acknowledge my indebtedness to Dr. Hoppin, Lecturer on Vases at the American School at Athens in 1897-98, for kind assistance.

² The first list of cylixes which show both techniques was made by Otto von Jahn (*Vasensammlung zu Munich*, 1854, Einleitung, Anm. 1186). Afterward this list was greatly increased by Klein (*Euphronios*², p. 291). The following list adds five cylixes to those mentioned in Klein's list. All references to Klein are to the list as given in his *Euphronios*², pp. 291 ff., unless otherwise specified. I indicates the inside; A and B the designs on the outside.

CYLIXES WHICH HAVE THE MIXED TECHNIQUE WITH

A. Interior black-figured and exterior red-figured. [Except No. 21, eye-cylixes.]

1. Brit. Mus. E 3. Klein, No. 8. Hischylos and Epiktetos.
I. Youth mounted.
A. Silenus. B. A Silenus similar to A.
2. Brit. Mus. E 4. Klein, No. 3. Typheidides.
I. Doe. *ὁ παῖς καλός*.
A and B. Anthemion design between the eyes.
3. Munich 1021. Klein, No. 20. Memnon vase.
I. Bearded satyr running. ME ME MNON Καλός.
A. Mule. B. Nose.
4. Munich 1023. Klein, No. 15.
I. Youth wreathed and wearing a chlamys.
A. Wounded man crouching. B. Stag.
5. Munich 1232. Klein, No. 5.
I. Minotaur.
A. Armed warrior. *καλὸς ὁ παῖς*.
B. Man, bearded and wreathed, with a coil of rope in left hand.

It is well known that Andocides was a master of both styles and that he was fond of combining them, especially on vases

6. Munich 1240. Klein, No. 19.
 - I. Bearded satyr with wine-skin.
 - A. Armed youth. B. Nose.
7. Munich 111. Klein, No. 9. Memnon vase.
 - I. Mounted youth.
 - A. A youth. M N K A. B. Nose.
8. Paris, Cabinet des médailles. Klein, No. 18. Chelis.
 - I. Satyr with rhyton.
 - A. Youth with staff. B. Conventionalized plant.
9. Würzburg III, 358. Klein, No. 10. Epiktetos and Nikosthenes.
 - I. Youth with skyphos.
 - A. Satyr. B. Horse.
10. Louvre. Klein, No. 17. Nikosthenes.
 - I. Bearded man. . . ΚΟΣΘΕΝΕΣ ΕΡΟΙ . .
 - A. Youth. B. Ram.
11. Orvieto, Sammlung Faina. Klein, No. 2. Hischylos and Epiktetos.
 - I. Stag.
 - A. Youth running. B. Wanting.
12. Copenhagen, Müller, Mus. Thorwaldsen 93. Klein, No. 4.
 - I. Doe.
 - A and B. Nose.
13. ? Klein, No. 6. Pamphaios.
 - I. Armed warrior.
 - A. Minotaur. B. Vase with high foot.
14. *Cat. Campana*, Ser. VI-VII, 113. Klein, No. 7.
 - I. Archer.
 - A and B. A discobolus.
15. Rome, Museo Gregoriano. Klein, No. 11. Pamphaios (?).
 - I. A youth. ὁ παῖς καλός.
 - A. A youth with staff. B. A youth stooping.
16. Petersburg, Sammlung der Akademie. Klein, No. 12. Hischylos and Epiktetos.
 - I. Youth.
 - A. Bearded man. B. Mule.
17. Copenhagen, Mus. Thorwaldsen 92. Klein, No. 13.
 - I. Youth with drinking-horn in each hand.
 - A. A youth with two staves. B. A warrior stooping.
18. *Bull. dell' Inst.* 1881, p. 246. Klein, No. 14.
 - I. A youth running.
 - A. Youth crowned, with taenia. B. Youth extending left hand.
19. Würzburg III, 357. Klein, No. 16. Hischylos.
 - I. Youth with chlamys.
 - A. Man raising helmet from the ground. ὁ πα(ῖ)ς καλός.
 - B. Youth with discus in his hand. καλὸς ὁ πα(ῖ)ς.

of his favorite shape,—the amphora;¹ but unlike most vase-painters who had both styles at their command, he seems to

20. Coll. N. Desverger 102. Klein, No. 21. Memnon vase.
 - I. Poseidon with trident and fish.
 - A and B. A stork.
 21. *Cat. Campana*, Ser. VI–VII, 625. Klein, No. 22.
 - I. Poseidon with trident.
 - A. Herakles and Nemean lion.
 - B. One Silenus holding a horse by his tail while a second places a wine-skin upon the horse.
 22. ? Klein, No. 1. Hischylos.
 - I. A stag.
 - A. A youth with leaping-weights.
 - B. An object resembling a stump.
 23. [Klein, *Die griechischen Vasen mit Lieblingsinschriften*², p. 55, No. 5.] Memnon vase.
 - I. Warrior running.
 - A. Discobolus. B. A youth (partly broken).
 24. Rome, Kunsthandel (Luchetti). [Klein, *op. cit.* p. 55, No. 6.] Memnon vase.
 - I. A warrior.
 25. Brit. Mus. [Klein, *op. cit.* p. 54, No. 2.] Memnon vase.
 - I. Armed slinger.
 - A. Mule. B. Leaf.
- B. Interior red-figured and exterior black-figured.*
1. Palermo, Nat. Mus. [Hartwig, *Meisterschalen*, p. 88.]
 - I. A Silenus. *καλὸς κος*, which is restored *καλὸς Ἐπὶ λυκος*.
 - A and B. A flying Nike.
 2. Louvre. Klein, p. 296. Epilykos.
 - I. A youth balancing a huge amphora.
 - A. Herakles. B. Cynus (?).
 3. *Bull.* 1879, p. 154, “aus Suessela.” Klein, p. 296.
 - I. In fully developed red-figured technique. A and B. The exterior has a Silenus under each handle.
- C. Exterior partly black-figured and partly red-figured. No interior decoration.*
1. Palermo. Andocides cylix. Klein, p. 296.

[Described fully below, in the text, pp. 330–332.]
- D. Interior partly black-figured and partly red-figured. Exterior red-figured.*
1. Brit. Mus. E 2.
 - I. Within a thin red circle, a youth in red-figured technique, wreathed and wearing a chlamys. Around this circle, in black-figured technique, a frieze of four galleys sailing to the left on waves.
 - A. Two youths. B. Two youths.

¹ Hoppin, *Euthymides*, p. 15. The first list of amphorae that show the mixed technique was made by Otto von Jahn (*Vasensammlung zu Munich*, Einleitung,

have been as fond of one as of the other, so that in his work the black-figured is not, as in other cases, made subordinate to the newer style.¹ In view of this fact, it need not seem strange that Andocides, who was a vase-painter possessed of some originality in his ideas, should have devised this means of giving each style equal prominence on this cylix.

This vase was found in Chiusi and was first published by Braun in 1838, and again by Schneider in 1889.² It is an eye-cylix of considerable size and depth, with a high foot, from which extends a circle of alternate red and black rays; one pair of eyes is black on a red ground; the other, red on black. Between the eyes on the black-figured side is a group, and between those on the red-figured side is a single figure; at each handle is a group of three figures, partly red-figured, partly black, the dividing line coming in the centre of the handle, so that each technique finds illustration on exactly one-half the

Anm. 494). Afterwards this list was increased by Klein (*Euphronios*², p. 36), and later by Schneider (*Jb. d. Arch. Inst.* 1889, p. 196, note 15), whose list is as follows:

- | | | | |
|---|------------------------------|------------------------------------|----------------------|
| A. Andokides vase. | s.f. dionysisch. | r.f. Artemis, Apollon, Leto, Ares. | Klein e. |
| B. München 373. | s.f. Heraklesabenteuer. | r.f. dionysisch. | HIPOKRATES
KAIOS. |
| | | | Klein a. |
| C. Brit. Mus. 608. | s.f. losende Helden. | r.f. Heraklesabenteuer. | Klein g. |
| D. München 388. | s.f. Heraklesabenteuer. | r.f. dionysisch. | Klein c. |
| [Furtwängler assigns this vase to Andocides. See Furtwängler und Reichhold, <i>Griechischen Vasenmalerei</i> , I, p. 15.] | | | |
| E. München 375. | s.f. losende Helden. | r.f. dionysisch. | Klein b. |
| F. Bourguignon. | s.f. losende Helden. | r.f. losende Helden. | |
| G. Bologna Mus. Civ. | s.f. Heraklesabenteuer. | r.f. dionysisch. | Brizio S. 44. |
| H. Louvre. | s.f. dionysisch. | r.f. Heraklesabenteuer. | Klein f. |
| I. Louvre. | s.f. Brautzug. | r.f. Cheiron, Achill. | |
| K. ? | s.f. Herakles mit dem Stier. | r.f. dasselbe. | Klein d. |

[This vase is now in the Boston Art Museum. For the subject, see Cecil Smith, *The Forman Collection, Cat. of Sale*, London, 1899, No. 305, with plate, and E. Robinson, *Twenty-fourth Annual Report of the Museum of Fine Arts at Boston* for 1899, p. 81, No. 36. Also, for a different interpretation of the vase, see Furtwängler und Reichhold, *op. cit.* I, p. 16 and note 2.]

- | | | | |
|-----------------------|------------------|------------------|----------|
| L. Würzburg, III, 51. | s.f. Kampfszene. | r.f. dionysisch. | Klein h. |
|-----------------------|------------------|------------------|----------|

¹ Richard Norton, 'Andocides,' *Am. J. Arch.*, First Series, XI (1896), p. 1; but for a different view, see Furtwängler und Reichhold, *op. cit.* I, p. 17.

² *Bull. d. Inst.* 1838, pp. 83 ff.; *Jb. d. Arch. Inst.* 1889, pl. iv.

surface of the cylix. The vase shows well the characteristics of Andocides's style; the composition of the groups is good, the action rather free. The Greek love of symmetry is prominent here, while there is sufficient variety of detail to avoid monotony. This may be seen in the groups at the handles, which are, in their general composition, the same. Yet when we study the figures separately we find many differences in detail. The subject in each is the contest of two warriors over the body of a wounded hero; in each group one of the combatants and the fallen man show the black-figured technique with a wealth of detail brought out by incised lines, while on chlamys, cuirass, and crested helm, scabbard and shield, there is applied color in dark red, a common feature in Andocides's vases;¹ but the shield of the fallen warrior and the entire figure of the second combatant are red with details in black, or black with some red applied. As the fallen man is placed so that all except his left arm bearing the shield is in black-figured technique, while the shield is in the red-figured, the shield forms, whether intentionally or not, a transition between the two sides of the exterior; for while it is itself red on a black background, it serves as the background for a black-figured emblem, a tripod on one, a snake and balls on the other.

The same love of symmetry which we observe in these groups, we notice also in the group between the eyes on the black-figured side of the cylix; here two Scythian bowmen face each other, one on either side of a tree; each holds his bow in the left hand and his arrow in the right; one wears a quiver, the other has none; both have pointed beards; both are dressed in the usual Scythian costume with pointed cap and close-fitting long-sleeved garment reaching to the ankles; the pipings and ornaments are worked in incised lines. On the other side of the exterior, instead of a group, we have only a single figure with the Scythian dress, but beardless, wearing his bow and quiver at his side, and holding his trumpet to his lips with both hands; the action of the figure is rather striking in its naturalness, and

¹ Norton, *op. cit.* p. 9.

the drawing shows great delicacy. In dress this figure resembles the others, except that he wears no cap.

The artist's signature, which is written retrograde and is not wholly preserved, appears above one of the eyes on the black-figured side of the cylix.¹

This cylix shows in such a unique way the union of the two techniques, and, although it exhibits the red-figured style in a highly developed state, still preserves so clearly a reminiscence of the older style in the use of extra color in places and in the use of incised lines, that it suggests with peculiar force the problem as to the origin of the red-figured technique in Attic vases.

It may never be possible to find out just the year when this new method was introduced to the world, or the particular vase-painter who invented it,² but we may at least note some of the tendencies of the times which led to the conception of the idea, and trace some steps in the history of vase-painting and sculpture which may have suggested it to the mind of the artist.

It has been well said³ that the red-figured technique probably never had any development in the true sense of the term, but all at once flashed upon the mind of the artist as a fully developed idea. Yet an idea does not spring into being without some previous influences which have led to its birth; there must have been a process of growth, though perhaps unconscious, a period of struggle and experiment to obtain a certain effect. In the theories hitherto proposed as to its development, there has been a tendency to narrow the origin to one phase of art, and to pay too little attention to the interaction which must always

¹ This signature is over the eye to the left of the side that shows the black-figured technique, and reads thus:



² The inventor of the red-figured technique may have been Andocides, as Furtwängler suggests (Furtwängler und Reichhold, *op. cit.* I, p. 17), or Epictetus, as Hartwig claims (Hartwig, *Griechische Meisterschalen*, p. 12).

³ Norton, *op. cit.* p. 35; Schneider, *op. cit.* p. 203.

have existed between ceramics and sculpture;¹ this influence may have been somewhat unconscious, but was none the less potent in its results. If then we grant, as I think we must, this interaction between the two branches of art, we cannot seek for that which suggested the idea of the red-figured technique in either class of monuments to the exclusion of the other, nor can we accept any theory which does not consider *all* the methods of art expression that may have given rise to this technique.

In the first place, let us consider what the tendency of Greek art was in the sixth century B.C., and wherein lay the advantage of the new method over the old.

There was at this time a singularly strong tendency toward naturalism, and it undoubtedly had its effect on the vase-painters. It was also an age of experiment, of inventions, of steady progress toward the most effective use of color. Now it is nearer to nature to represent figures light in the masses with only details dark, standing out boldly from a dark background, than to represent them by a silhouette; the best method of obtaining this effect was the goal toward which the vase-painters were consciously or unconsciously striving. As in sculpture the order of development was from low relief to high relief, the background being gradually cut away deeper and deeper, until the figures stood out boldly from the field, so in vase-painting we find flat, dark figures on a light ground followed by light figures, all the modelling of which stands out distinctly from a dark ground.

On the red-figured side of the Palermo cylix we find, as I have said, a reminiscence of the older technique in the application of extra color in parts. This seems to be a trace of the so-called "polychrome technique," the principle of which may be traced back even beyond the Mycenaean period, as is clearly shown by certain vase-fragments found in Melos during the recent excavations there; it appears during the Mycenaean age in

¹ This connection has been treated suggestively by Brownson in an article published in the *Am. J. Arch.*, First Series, VIII (1893), pp. 28-41.

one class of vases and also on a grave stele ;¹ we find it in the early Cretan² and Argive vases, while those from Naucratis³ and a series from Rhodes⁴ show a marked tendency to polychrome decoration. It becomes a marked feature in the earlier black-figured vases, and continues more or less prominent in vase-painting until it finds its highest expression in the beautiful white lecythi of Athens during the second half of the fifth century and later.⁵

In one series of "polychrome" vases Six⁶ thinks he has found the true origin of the red-figured technique. It is a series of vases which show a dark ground with figures painted *over* it in white, reddish brown, cream-white, and occasionally some yellow; in two fragments among those found on the Acropolis the ground is dark brown with figures in gray. He assigns the whole class to a school at Athens, and shows that the earlier ones belong to a period before the red-figured vases originated. Furtwängler⁷ classifies them all as red-figured. It is well known that in many of the Attic black-figured vases the artist used white and red over the black of the figures to such an extent that sometimes this extra color almost concealed the black, and produced a very different effect from the monochrome black-figured vases; such figures were so much gayer and lighter in their total effect as to be of nearly the same value as the clay background, so that there was no contrast.

During the later period of black-figured vases the whole vase was covered with a glaze except on the two small panels; that, in itself, was a preparation for the next step, which was a most natural one, namely, to bring the black glaze up to the picture

¹ Tsountas and Manatt, *Mycenaean Age*, p. 395; *Eph. Arch.* 1896, pls. i and ii.

² *Monumenti Antichi*, VI, pls. ix, x.

³ *Naukratis*, Egypt Explor. Fund, p. 49.

⁴ *J. H. S.* VI (1885), p. 188, note 2.

⁵ *Am. J. Arch.*, First Series, II (1886), p. 406.

⁶ Six, 'Vases Polychromes sur Fond Noir,' *Gaz. Arch.* 1888, pp. 193 ff. and 281 ff.

⁷ Furtwängler, *Vasensammlung im Antiquarium* (Berlin), Nos. 2239-2244 and 4038; while he classifies them all as red-figured, he says of No. 2239 that its style is nearer the black- than the red-figured technique.

to serve as a background for the light figures. We find a similar effort to express the contrast on even earlier monuments, as in the frequent recurrence on black-figured vases of a white emblem adorning a black shield, or in the grave stelae such as that of Lyseas, showing a light figure against a dark ground. It is here that Loeschcke¹ sees the origin of the red-figured technique.

Hoppin finds the origin of the "polychrome" technique in the technique of certain fragments,² found in the excavations at the Heraeum, to which he has applied the term "Dorian"; those most striking in this connection show a cream-white design on a dark red ground and may well be considered the prototype of the later "polychrome" fragments found on the Acropolis. There is little doubt that in the seventh century the influence of this "Dorian technique" was spread throughout Greece and Asia Minor pretty widely, and it seems probable that it should have suggested the use of color as we find it on such stelae as that of Lyseas and on the Clazomenae sarcophagi; but while the influence may at first have been from ceramics to terra-cotta and sculpture, in later times the trend of influence may have been in the opposite direction, so that these works may, in their turn, have influenced the later vase-painters.

No treatment of this subject would be at all complete which did not mention Klein's theory³ that the origin of the red-figured technique is to be found in the Gorgoneion on the inside of cylixes. The Gorgoneion surely affords a most striking variety of methods in the use of color; from its shape it lends itself easily to a round space, such as that of a shield, or the inside of a plate or cylix. We find it in pure black-figured technique on red ground, or with details picked out in color; we find it in white on a black shield, or in black on a white shield; in some black-figured plates and cylixes we find

¹ *Athen. Mitth.* IV, p. 36.

² These will be published by Dr. Hoppin in the forthcoming publication of the vases found at the Argive Heraeum.

³ Klein, *Euphronios*, pp. 32 ff.

the face left the color of the clay, with the details and outlines incised and extra color used; finally, we find it in pure red-figured technique with no extra color or incised lines. The Gorgoneion serves, then, as an excellent illustration of the truth of the statement that the sixth century was an age of experiment seeking for the most effective use of color; but, so far as I can find, it shows nothing that has not its parallel elsewhere.

One of the most interesting combinations of different techniques is found on a sarcophagus from Clazomenae in the museum at Berlin.¹ The decoration of the lower part is in the black-figured technique; that of the upper part in a technique resembling the red-figured, but differing from it in having a preliminary white slip upon which the picture was drawn. As a subordinate decoration are two heads in this same technique, and also two outline heads.² This is one of the latest of the sarcophagi, belonging, according to Zahn, to a period not earlier than the middle of the sixth century. He thinks that the origin of both black- and red-figured vases is to be sought in Clazomenae. But even if we had much clearer evidence than we have at present of the direct influence of Clazomenae upon Attic ceramic art, it would seem unnecessary to seek there what may be found much nearer.

From all the examples given, it will be clearly seen that in the Greek art of the sixth century there was a growing tendency in terra-cottas, sculpture, and vase-painting toward the use of a light color for the figures and some dark color for the background. We have found the "polychrome" technique, whose origin we need no longer seek in the Orient but in the

¹ Mentioned by Dr. Zahn in a paper read by him before the German Institute at Athens, February 16, 1898 (see *Athen. Mitth.* XXIII, 1898, p. 38), and published in the *Antike Denkmäler*, II, pl. 25.

² It has been suggested that drawing in outline may have formed an intermediate step between the black-figured and red-figured techniques. This may have had some influence in suggesting the red-figured technique, but since it can be traced back to Mycenaean influence (Joubin, *B.C.H.* 1895, pp. 69 ff.) and is found on vases of various periods and localities, it can hardly be said to have been the intermediate step which led to the origin of red-figured technique.

old Argive pottery of the so-called "Dorian technique," prevalent in vases of the period previous to those of the red-figured technique at Athens; we have found a certain class of these which seem to have been the work of an Athenian school, showing the vase entirely covered with a dark slip and the figures painted over it in light colors. We have found the same relative arrangement of color in grave stelae and terra-cotta sarcophagi. But that in any one of these *exclusively* is to be found the origin of the red-figured technique in vases seems a most inadequate theory; rather do they *all* express the same tendency. But on the other hand, with all these works about him to suggest the idea consciously or unconsciously, what would be more natural than that some ingenious vase-painter should conceive the idea that it would be much simpler to paint around the outline of the picture in black, *leaving the figures the color of the clay*, and then fill in the background with black, instead of pursuing the older method? At first not realizing that all the details could be brought out most richly and simply in black, he would cling to the old tradition of "extra color" for certain parts; but gradually even that reminiscence of the old technique would vanish, his tools would be perfected, his hand become more skilled, and there would be established the fully developed red-figured technique in all its severe simplicity.

MAY LOUISE NICHOLS.

American School
of Oriental Research
in Palestine

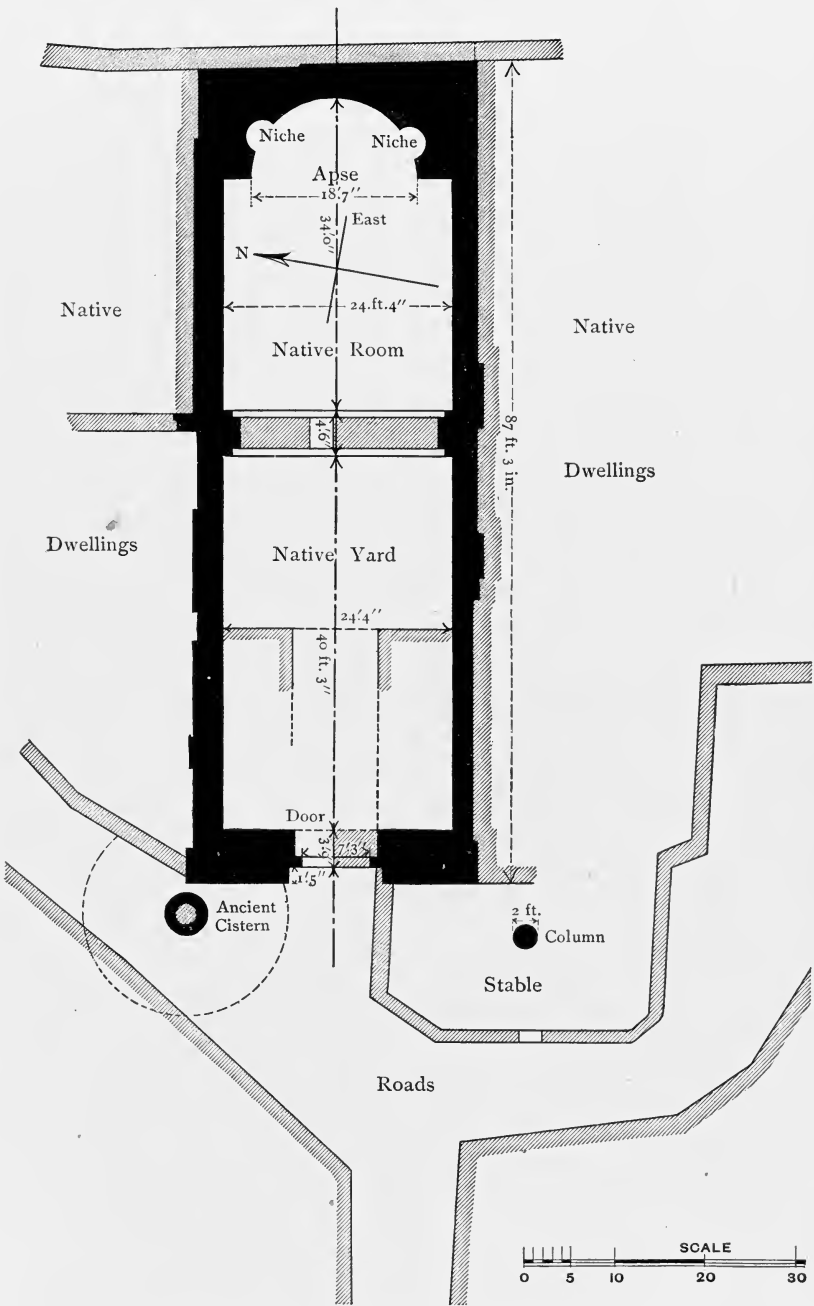
REMAINS OF A MEDIAEVAL CHRISTIAN CHURCH
AT ZER'IN

[PLATE XIII]

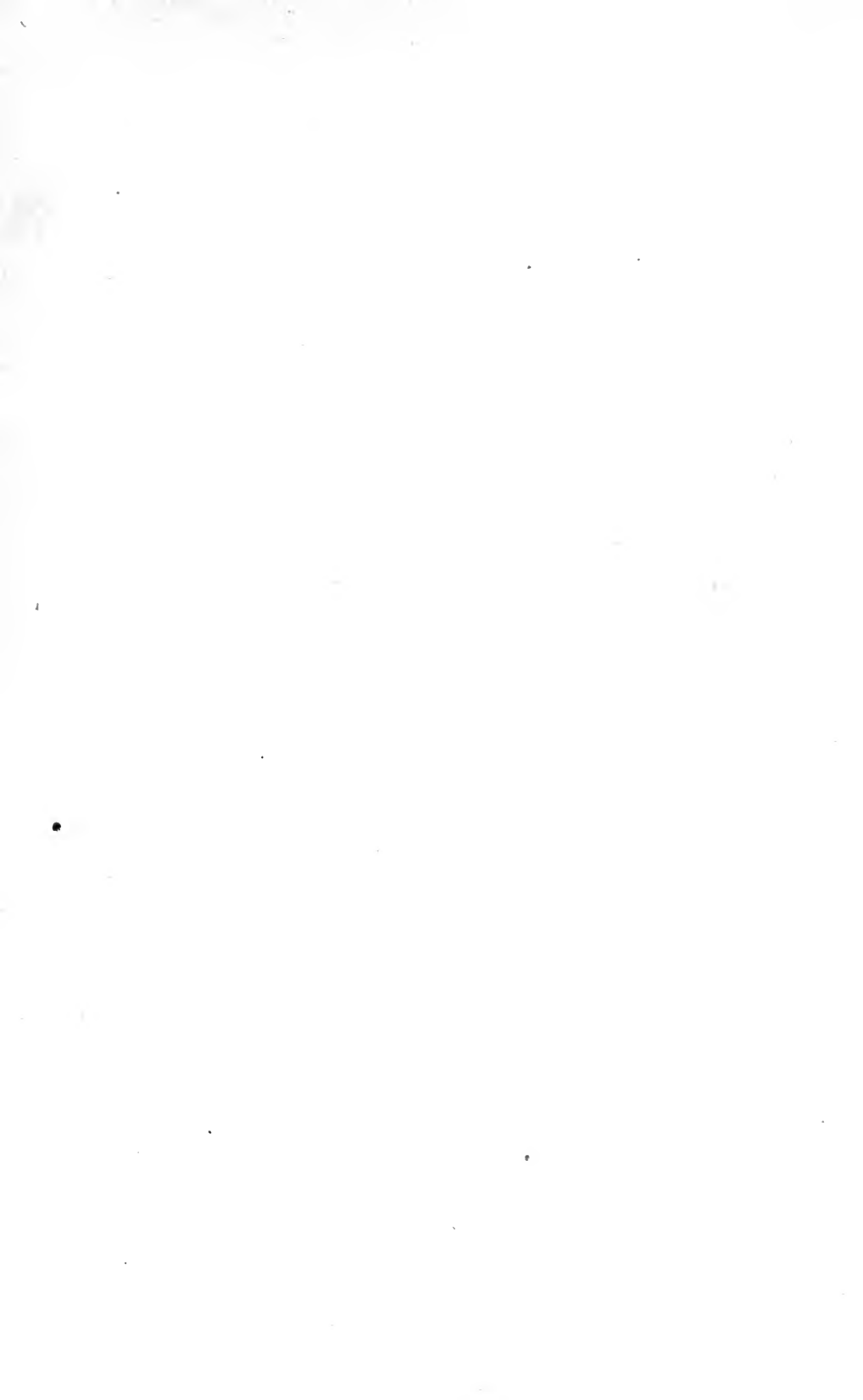
THE village of Zer'in stands upon the site of the ancient city of Jezreel, a favorite residence of the Israelite kings of the dynasty of Omri. In the fourth century of our era it was "a fine village." It is mentioned more than once by the crusading historians under the name "parvum Gerinum," but hitherto no Christian remains have been observed there. Recently, however, the ruins of a church were discovered among the hovels of the village by Dr. G. Schumacher, who examined them at the instance of the Director of the School in Jerusalem, and made the following report with the accompanying plan (PLATE XIII):¹

"In March, 1902, I was informed by a native of Jenin that the villagers had been digging in Zer'in, and had discovered ancient remains in a hut on the northwest of the village not very far from the water cistern. On the 26th of April I proceeded to the spot, and found the remains to be those of a large Christian church. A native hut is built into the apse and the adjoining nave; the yard occupies the western half of the nave, and is closed by a door built into the old portal facing west. The apse of the church has not been much injured; it has a width of about 18 ft. 7 in., with two niches in the vault, each measuring 3 ft. 2 in. in width and about 6 ft. in height. Both niches have been filled with native mud masonry. The

¹ In PLATE XIII the foundation lines of the church are in black; additions of later date are indicated by the lighter shading.



A MEDIAEVAL CHURCH AT ZER'IN (JEZREEL)



main axis of the church runs nearly due east. The width of the nave is 24 ft. 4 in.; the length of the whole building, from the exterior wall of the apse to the western face wall of the portal, is 87 ft. 3 in. This length has apparently at one time been divided into two parts by a transverse wall, traces of which and of pillars are still visible. The present hut extends to this division. The area outside (west) of this division wall is 40 ft. 3 in. long, and halfway to the gate there are traces of masonry by which the width of 24 ft. 4 in. was divided into three compartments. The ancient portal has a width of 7 ft. 3 in. between the jamb stones; a bay 3 ft. 9 in. deep and about 9 ft. 6 in. wide, with signs of an arch, leads from the portal into the church. The face of the entrance, the ancient *porticus*, was also arched, and projects 1 ft. 5 in. beyond the actual face of the portal.

“On the outside of the church is found on the north of the portal an ancient cistern, and on the south, in the stable of a villager, the stump of a column 2 ft. in diameter. Other prostrate shafts are found in the same neighborhood, covered by straw and *débris*.

“The walls of the church are still standing, to the height of 8 or 10 ft. The courses of masonry are 2 ft. to 2 ft. 2 in. in height; some of the stones near the portal are 3 ft. to 3 ft. 10 in. long. The stones are carefully dressed, without bosses, and, to judge from the chisel marks, of crusading origin; the foundations of the apse may be early Christian. The material is the local hard limestone of Jebel Fuḳū'a.

G. SCHUMACHER.”

"INVESTIGATIONS AT ASSOS"¹

IT gives the Editors of this *Journal* great satisfaction to announce the appearance of Part I of *Investigations at Assos*. This publication is quite distinct from the *Reports* previously brought out; it is of large folio size, fourteen by twenty-one inches, and aims to present to the eye the exact results of the discoveries made by the expedition to Assos. This book of plates has been under the editorial charge of Francis H. Bacon, one of the members of the expedition, who has accomplished a difficult task in a most praiseworthy manner. In the preface he informs us that the entire material of the expedition was left in the hands of Mr. Clarke for arrangement and publication; owing to various hindrances, Mr. Clarke could not do the work, so that it ultimately devolved on the present editor. He has had the valuable assistance of Robert Koldewey. Despite the lapse of years, owing to the extreme care with which the plans, drawings, and photographs were executed, we seem to be looking at the product of a very recent excavation.

A brief history of Assos is given, largely taken from the previous *Reports*; there follows a summary of the descriptions of various travellers who have visited Assos in modern days, with an account of the experiences of the American

¹ *Investigations at Assos*: Drawings and Photographs of the Buildings and Objects discovered during the Excavations of 1881-1882-1883. By Joseph T. Clarke, Francis H. Bacon, Robert Koldewey. Edited with Explanatory Notes by Francis H. Bacon. Cambridge, Mass.: Archaeological Institute of America. London: Bernard Quaritch, and Henry Sotheran & Co. Leipzig: Karl W. Hiersemann.

excavators. All this, however, is but by way of preface to the illustrations which follow. The present Part includes the Agora, the Stoa, the Bouleuterion, and the Inscriptions and Bases from the Agora, with necessary maps, of which that made in Germany is not up to the standard of the book. Many photographs are very successfully reproduced by heliotypes, which have all the accuracy of the camera with an artistic element added; smaller objects are done in half-tones. The part of the book which will appeal most to archaeologists and architects is the drawings and restorations of Messrs. Bacon and Koldewey, which make clear every inch of the ground. Mr. Bacon already enjoys a well-deserved reputation as a draughtsman; that reputation this book will enhance.

The Inscriptions will appear in their appropriate places. Those from the Agora appear in this Part. They are translated and annotated by Professor J. R. S. Sterrett; they are followed by the local block of measures and the tile-standard.

The pages are issued loose, for handy use. A portfolio to contain all will be delivered with the last Part. The typography, paper, and the various processes by which the illustrations are produced are all admirable. Future Parts — four in number — will contain the Baths and Heroön, Mosaic Pavements, ancient and Byzantine, Theatre, Greek Bridge and Roman Atrium, Temple and Sculptures, Fortification Walls and Gateways, Gymnasium, Mausoleums and Tombs, with the objects found in them, Figurini, Coins (treated by Professor Percy Gardner), Vases, and the Turkish Mosque.

It is interesting to note that an enterprising architect has already employed in an American building some of the peculiar features of the work of his confrères of Assos in the Troad.

The Archaeological Institute of America, when hardly three years old, signalled her entrance upon the field of research in classic lands by the excavations at Assos. The School at Athens, founded in 1881, the year in which this work opened, followed the example set by her mother, the Institute, and began almost

immediately upon her foundation to conduct explorations and investigations at various sites in Greece. The most extensive and significant of these—at least of such as have been completed, and probably of all—were those carried on between 1892 and 1895, under the direction of Professor Charles Waldstein, at the seat of the ancient sanctuary of Hera near Argos. As the present number of the *Journal* is going to press, the first volume of *The Argive Heraeum*, in which the results of these excavations are worthily set forth, is issued to the public; it is to be followed by the second and concluding volume in a few months. This beautiful and important publication—of which a notice will appear in a later number of the *Journal*—is appropriately dedicated to Professor Charles Eliot Norton, the first president of the Institute, to whose initiative and support are due, more than to any other man's, not only the prosecution of the work at Assos, but also the adequate publication of it in the *Investigations at Assos*.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

HAROLD N. FOWLER, *Editor*

49, Cornell Street, Cleveland, Ohio

GENERAL AND MISCELLANEOUS

ILLUMINATED MANUSCRIPTS OF ST. AUGUSTINE'S CIVITAS DEI. — The Société des Bibliophiles, of Paris (31, Rue Cambon), founded in 1820, proposes to issue a publication relating to a family of manuscripts of the *Civitas Dei* of St. Augustine, illuminated by artists of the middle and end of the fifteenth century. Many reproductions from manuscripts in the Bibliothèque Nationale at Paris and the libraries of the Hague, Nantes, Mâcon, etc., will enrich this important work. Several of these are already finished, and there is every reason to hope that the volume will appear before the end of the current year.

INTERNATIONAL BULLETIN OF NUMISMATICS. — A new numismatical periodical, the *Bulletin International de Numismatique*, to contain news of discoveries, of meetings of numismatic societies, and museums, in addition to bibliography and necrology, is published under the auspices of the Société Française de Numismatique and edited by Adrien Blanchet (Paris, Leroux). Volume I, 1902, No. 1, contains little or nothing of especial interest.

INTERNATIONAL BIBLIOGRAPHY OF ART. — The first number of an *Internationale Bibliographie der Kunstwissenschaft*, issued by A. J. Jellinek, of Berlin, has appeared. There are to be six parts every year. (*Athen*. May 5, 1902.)

CONVENTIONAL SIGNS FOR ANCIENT REMAINS. — A table of thirty or more signs to be used on maps and plans of Roman and prehistoric remains is given in *Arch. Anz.* 1902, p. 21.

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Dr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the JOURNAL material published after June 30, 1902.

For an explanation of the abbreviations, see pp. 99, 100.

WORK OF THE GERMAN ARCHAEOLOGICAL INSTITUTE FOR 1901-02.—No issues have been made of the serial publications supported by the Institute other than the usual *Jahrbuch* and *Anzeiger* and the *Athenische* and *Römische Mittheilungen*, though important work has been done, especially on the *Antike Sarkophage*. The study of Roman and pre-Roman Germany, in coöperation with local and provincial societies, has become a regular part of the work of the Institute. The most important point at present is Haltern, in Westphalia. The island of Cos, explored by R. Herzog, is a new field. At Pergamon, where the work is now in charge of Dr. Dörpfeld, the main street of the town has been found and explored. Both the Athenian and the Roman branches have carried on the usual lectures and excursions. Both libraries have been improved and have received substantial gifts of money from K. Baedeker. The first volume of an illustrated catalogue of the Vatican antiquities, by Amelung, has been issued. Further study of the water supply systems of Athens and of Megara is going on; also P. Wolters' work on the vase-fragments of the Acropolis. (*Arch. Anz.* 1902, pp. 37-41.)

DALMATIA.—**Latin Inscriptions.**—In *Jh. Oesterr. Arch.* I. V, 1902, Beiblatt, coll. 1-8, HANS LIEBL publishes three epitaphs and an inscription with the titles of Claudius, now in Knin, three inscriptions from Pridraga, and a fragment of a law engraved on a bronze tablet bought at Prague.

TUMULI AND POTTERY IN GEORGIA.—In *R. Arch.* XL, 1902, pp. 62-78 (10 figs.), G. SEURES, under the general heading 'Notes on Russian Archaeology,' describes tumuli and vases with geometrical ornamentation in the region of Elisabethpol, in Georgia. The article is an abridgment of a treatise by E. RÖSLER, in the *Verhandlungen der Berliner Gesellschaft für Anthropologie, Ethnologie, und Urgeschichte*, 1901 (February 16), pp. 78-150 (67 figs.). Rösler's excavations showed that the people who dwelt in this region in the bronze age buried their dead in a squatting posture, and had pottery adorned with geometrical patterns and with animals and human beings rudely represented. The date of the tumuli cannot as yet be fixed, but their poverty and rudeness do not prove great antiquity. The civilization of the people buried here is related to that of Scythia, Thrace, Bosnia, and Hungary.

SOUTHERN RUSSIA.—**Various Antiquities.**—The most important object found here in 1901-02 is a sixth century (B.C.) gold sword sheath, from near the Don, which is a mixture of Greek and Siberian elements. Further, there are a third century bronze dish inlaid with silver, and small articles from the sixth century to Roman times, among them a large gold knob with a Chinese look, from the Kuban, north of the Caucasus; a quantity of bucchero ware with white-filled incised geometric ornament, and bronzes which point to Asia Minor, from south of the Caucasus; very ancient bright red pottery painted in geometric patterns, from the confines of Persia; red-figured vases and small Roman objects of the second century, from Chersonnesus; archaic Ionian pottery and a large, late amphora, inferior to contemporary Italian work, from Olbia; gold harness of peculiar design, at least as old as the fifth century B.C., from the basin of the Dnieper. (G. v. KIESERITZKY, *Arch. Anz.* 1902, pp. 44-46; cut.)

NECROLOGY.—**Franz Xaver Kraus.**—The death of Franz Xaver Kraus, Professor of History and Christian Archaeology at Strassburg, took place at San Remo, December 28, 1901. He was born at Treves in 1840. Among his numerous works his four volumes on the *Art and Antiquities of Alsace and Lorraine* and his *History of Christian Art* deserve especial mention.

• **Jacques Gabriel Bulliot.**—The death of Jacques Gabriel Bulliot, corresponding member of the Académie des Inscriptions et Belles-Lettres, took place at Autun, January 13, 1902. He conducted the excavations at Beuvray, the ancient Bibracte, and was the author of numerous books, among them *La Cité Gauloise* and *La Mission de Saint Martin dans le Centre de la France*. (*C. R. Acad. Insc.* 1902, p. 11.)

Ernst Zimmermann.—The death of Professor Ernst Zimmermann is reported from Munich. (*Chron. d. Arts*, 1902, p. 32.)

Adam Flasch.—The well-known archaeologist, Professor Adam Flasch, died at Erlangen, January 11, 1902. (*Chron. d. Arts*, 1902, p. 80.)

Karl Zangemeister.—The death is announced of Karl Zangemeister, the chief librarian of the University of Heidelberg, in his sixty-fifth year. Under his care the library became known as one of the best managed in Germany, and he was always ready to help and advise those who made use of it. He was one of the foremost writers on subjects connected with epigraphy and palaeography. His works on Pompeian wall inscriptions and on Roman inscriptions found in the Rhine provinces are the best of his numerous writings. Zangemeister, who was a pupil and friend of Mommsen, was a member of the Berlin Academy of Sciences, and president of the "Limes-Kommission." (*Athen.* June 21, 1902.)

Jules-Jacques Van Ysendyck.—Jules-Jacques Van Ysendyck, the architect, died at Brussels, March 17, 1901. Although known in Belgium as the architect of a number of splendid buildings, Van Ysendyck is better known to archaeologists through his publication, *Documents classés de l'art dans les Pays-Bas du X^e au XVIII^e siècle*, which is likely to remain for some time to come the best repository of information on the architecture and sculpture of Belgium. (*Bull. Com. Roy.* 1901, pp. 65-69.)

Mgr. Pietro Crostarosa.—In *Athen.* April 5, 1902, Lanciani records the death of Mgr. Pietro Crostarosa. He was secretary to the Commissione di Archeologia Sacra, in which capacity he was able to discover the historic crypt of Peter and Marcellinus, to open to students the cemetery of Nicomedes, and a new section of Priscilla's and Domitilla's, and to make of the Church of St. Cecilia one of the leading monuments for the study of early Italian art.

EGYPT

AMERICAN EXCAVATIONS.—G. A. Reisner, commissioned by Mrs. Hearst to conduct excavations for the University of California, has explored four sites in upper Egypt. The first was an extensive necropolis of the pre-dynastic period, on the eastern shore of the Nile, opposite the present **Menshiye**, near the village of **El-Akhaiwa**. In opposition to Petrie, who assumed that the graves of this period served for a second burial after decomposition of the body had taken place, and that at this burial the bones were carefully laid in order, Reisner has demonstrated that the latter is nowhere found to be the case. The bodies were placed in the tomb in a sitting posture. The dismembering of the skeleton was in

every case done by the grave robbers who rifled the tombs. Reisner found only one intact grave containing dismembered remains. Here, beyond question, a second burial had taken place; but in this case the grave had probably been ransacked soon after burial, the robbery had been discovered, and the relatives had reverently given the remains another burial. At Akhaiwa, Reisner also explored a necropolis of the later period (twentieth to thirtieth dynasties).

The exploration of the very ancient cemeteries of **Ballâs**, in which Petrie likewise made excavations during the winter of 1894-95, has led to the same results regarding burial as those just stated. The third necropolis explored by Reisner, that of **Naga-Dêr**, opposite Girge, is of somewhat more recent date. Here, alongside of graves of the earliest period, are also found some dating from the old and middle kingdoms; and in these many interesting finds were made — among other things, beautiful gold jewellery.

At **Dêr-el-Ballâs**, on the western shore of the Nile, nearly opposite Quft, Reisner also carefully explored the ruins of a city with houses and palaces dating from the time of the middle and new kingdoms, and made important disclosures regarding the location of the houses, which were built of unburnt tile. From this ruined city also comes a large and well preserved papyrus, containing a medical handbook. It is similar to the well-known papyrus of Ebers, but contains much that is new. It probably dates from the beginning of the new kingdom, about 1600 B.C. (G. STEINDORFF, *S. S. Times*, February 8, 1902.)

GREEK AND ROMAN ANTIQUITIES FOUND IN EGYPT IN 1901-02. — A treasure of silver table ware, including pieces of great beauty or of unusual shapes, and some thousand gold coins of Septimius Severus and his successors, among them several rareties, were found near the Temple of Ammon at **Karnak**. A considerable hoard of gold coins of the third century emperors, together with eighteen bars of gold, of which only four were rescued from the melting pot, were found near **Alexandria**. The inflow of water into the three-story tomb-building at Alexandria has risen to the floor of the second story, but measures are being taken to check it. Several groups of tombs, cut in the rock, with square chambers, vaulted ceilings, paintings, and triclinia for the funeral banquet, have been discovered on the island of **Pharos**. At ancient **Hermopolis** were found important papyri, and a Ptolemaic Egyptian temple in which were some marble heads with traces of painted stucco hair; in the **Fayum**, a Greek temple with wall-paintings and a large inscription; at **Theadelphia**, a house with frescoes; at **Abusir** (Busiris), near Memphis, by the Deutsche Orient Gesellschaft, Greek graves, of which the earlier ones have the bodies enclosed in cylindrical jars laid in pairs, mouth to mouth, and the others, of the fourth century B.C., use painted wooden coffins. Among these is the owner of the Timotheus papyrus. (O. RUBENSOHN, *Arch. Anz.* 1902, pp. 46-49; 2 cuts.)

ABUSIR. — **The Discoveries of the Germans.** — In *Berl. Phil. W.* April 19, 1902, is an enthusiastic account (from No. 10 of the *Mittheilungen* of the Orient Gesellschaft) of the discoveries of the Germans at Abusir, especially in the spot called Abu Gurab. Some of these discoveries have been mentioned in this JOURNAL (1901, p. 330; 1902, p. 58). Among the objects discovered, the reliefs of the temple of Ra are of especial importance. These, the temple itself, the basalt lion, and the buildings and

obelisks connected with the temple, make the art of the time of the fifth dynasty — the time when Egyptian art was at its height — better known than ever before. The Orient Gesellschaft is to continue the excavations, and there is every reason to believe that the results will be most valuable. In *S. S. Times*, July 5, 1902, G. STEINDORFF mentions the stone causeway leading up to the sanctuary, a colonnaded court, various rooms, and numerous tombs containing statues and reliefs. Tombs of the Middle Empire were also found, some of which contained various objects besides the sarcophagi. These tombs belong to a family of priests whose duty it was to pray for the soul of King Ne-woser-Re. His memory is thus seen to have been honored many centuries after his death. In a tomb of the Greek period was a papyrus of the close of the fourth century B.C., containing a dithyramb by Timotheus of Miletus, who lived from 447 to 357 B.C.

ABYDOS. — **Petrie's Excavations.** — Professor W. M. Flinders Petrie is again at work on the site of the ancient sacred city of Abydos. After having, during the past two years, examined the royal tombs of the prehistoric period and of the first two dynasties, he is now excavating in the ruins of the ancient city itself, which was only hastily explored by Mariette. Here, near the village of El-Kherbe, is found the sanctuary of Osiris, the god of the dead, unfortunately in a very imperfect condition, but in which important inscriptions from the sixth and twelfth dynasties, as well as from the beginning of the new empire (about 1600 B.C.), have already been brought to light. (STEINDORFF, *S. S. Times*, May 17, 1902.)

CAIRO. — **Greek and Roman Sculpture in the Museum.** — A list of Greek and Roman sculpture in the Cairo Museum is published by F. von BISSING in *Arch. Anz.* 1901, pp. 199-209 (11 cuts). Among the thirty-two pieces, which include heads, statues, reliefs, stelae, sarcophagi, etc., from archaic to imperial times, there is a stele with the dream-oracle of Apis painted on the sunken ground, and two examples, busts of Osiris and Isis, of sculpture in stone coated with stucco, dating possibly from the time of Hadrian.

REQAQNAH. — **Early Tombs.** — In *Biblia*, June, 1902, pp. 72-74, is a brief account, by JOHN GARSTANG, of excavations at Reqaqnah, in Upper Egypt, reprinted from *Man*. Many tombs of the third and fourth dynasties were excavated.

THEBES. — **The Palace of Amenophis III.** — The palace of Amenophis III at Malgata, discovered by Grébaut nearly twenty years ago and exposed to pillage since that time, is being systematically excavated by Newberry and Titus. The plan of the palace seems to have been quite similar to that of the palace which Amenophis IV erected for himself in Tel el-Amarna, and which was several years ago explored by Petrie. In the palace of Amenophis III the rooms were likewise adorned by beautifully decorated stucco floors, and the roofs were supported by columns. The walls were embellished with stucco work, the representations in part setting forth every-day life. In addition to state rooms, working rooms, the kitchen, with its storage closets, and a faience factory, in which the different amulets and ornaments were made, can also be distinguished. Not far from the palace was found an altar, built of tile, and at one time probably wainscoted with slabs of stone. It was quite similar to the one in the temple of Dêr el-Bahri, and this one was certainly dedicated to the sun-god. As the altars of ancient

Israel most likely also had a similar form, these remains of the old Egyptian cultus have an especial biblical interest. (G. STEINDORFF, *S. S. Times*, May 17, 1902.)

The Pharaoh of the Exodus. — The American Egyptologist, Groff, has demonstrated that the mummy regarded by Loret as that of Amenophis IV is really that of Meremptah, the Pharaoh of the Exodus. The mummy was found, with others, at Thebes in 1898. Its discovery proves that the Pharaoh was not lost with his troops in the Red Sea. (G. STEINDORFF, *S. S. Times*, February 8, 1902.)

BABYLONIA

BABYLON. — **The German Discoveries.** — In *Harper's Monthly Magazine*, April, 1902, pp. 809–814 (1 pl.; 6 figs.), MORRIS JASTROW, JR., describes the discoveries of the Germans in the Kasr (the palace of Nebuchadnezzar) and the temple of Nebo (Esagila) at Babylon. A colored plate reproduces the famous lion of glazed tiles. The discoveries have been mentioned in previous numbers of this JOURNAL. A popular account of these discoveries is contained in *Biblia*, February, 1902, pp. 341–347. In *Berl. Phil. W.* April 26, 1902, is a summary (from the *Vossische Zeitung*) of an address delivered by Professor DELITZSCH at a meeting of the Deutsche Orient Gesellschaft. In this he lays especial stress upon the points of contact between the Babylonian religion and the Bible, as shown by the recent discoveries. In *S. S. Times*, May 17, 1902, HILPRECHT states that the Germans are to excavate the mounds of Abû Hatab and Fâra, in southern Babylonia, besides continuing the work at Babylon. A brief account of the German discoveries at Babylon, with special reference to the inscribed tablets, is given by Hilprecht, *ibid.* July 5, 1902.

SYRIA AND PALESTINE

ABOU-GOSCH. — **The Tenth Legion *Fretensis*.** — In *C. R. Acad. Insc.* 1901, pp. 692–696, A. Héron de Villefosse publishes, with some comments, a letter from Père BERNHARD DROUBIN, announcing the discovery in the crypt of the church of St. Jeremiah at Abou-Gosch (better called Kyriat) of an inscription mentioning the presence of a detachment of the tenth legion *Fretensis*. The church is built in the walls of a Roman fort. Kyriat seems to be the site of the Emmaus of St. Luke.

BAALBEK. — **Excavations of 1900–01.** — The work at Baalbek under the patronage of the German Emperor has already almost completely elucidated the plan and architectural details of the great Temple of the Sun, with its two courts, great altar, and lustral basins, as well as of the Byzantine basilica and the Arabic fortress which were constructed in the great court with the material of the temple. Arabic inscriptions give the history of this fortress. Among the few Greek and Roman inscriptions are some earlier than the date of the temple, — the reign of Antoninus Pius. Some important corrections have been made upon Wood's studies of the temple (1757), especially in the magnificent scheme of wall-decoration; and work upon the Round Temple, the Temple of Jupiter, and some temples in the neighboring village of Nicha, has added to our knowledge of Romano-Syrian art. (O. PUCHSTEIN *et al.*, *Jb. Arch. I.* XVI, 1901, pp. 133–160; 4 pls.; 9 cuts.)

In *Biblia*, March, 1902, pp. 387–393, is a brief report of the German excavations. The centre of the whole group of buildings is a great rock altar,

once cut smooth and pieced out with masonry to make its shape regular. This the Romans surrounded by a series of walls, making a terrace or platform level with the base of the altar. On the east, north, and south sides these walls constituted passages and chambers under the general level of the platform, and on the west side the great temple filled up the space on a huge artificial mound of earth. On the walls of the substructure surrounding the great court of the rock-hewn altar was erected a magnificent colonnade with square and semicircular chambers. This has been discovered by the present excavators. It stood on three steps leading down to the great atrium. At each side of the altar was a basin formed of a low wall, with sculptured panels on the outside filled with winged genii, etc., and festoons of flowers. This decoration was never completed. On the west side of the atrium stood the great temple, which has not yet been excavated. In the centre of the great atrium are the remains of an early Christian basilica. The entire site is covered with Byzantine and Arab ruins. (See also *Berl. Phil. W.* April 26, 1902.)

GEZER. — **Excavations Proposed.** — The new site selected for excavations by the Palestine Exploration Fund of London is the biblical Gezer, which had a continuous history from pre-Israelite times to the period of the Crusades. Mr. Stuart Macalister, well known from previous excavations which he conducted with Dr. Bliss in behalf of the Fund, will be in charge of the digging. The firman, for which he went personally to Constantinople last fall, may have been granted before this, so that excavations could begin before the season was too far advanced for work in the field. In view of the fact that Clermont-Ganneau discovered the bilingual inscriptions (Hebrew and Greek) at Gezer which define the limits of the ancient city, the natural expectation prevails that other important monuments will be discovered in the course of the exploration. (*S. S. Times*, July 5, 1902.)

SENDSCHERLI. — **The Expedition of the Orientkomitee.** — The Orientkomitee has sent an expedition to Sendscherli to renew the excavations under the direction of Professor v. Luschan. Work began January 3, 1902. The third number of *Mittheilungen aus den orientalischen Sammlungen der königlichen Museen* is to contain articles on the reliefs of the southern city gate and the outer citadel gate, as well as the lions of the middle citadel gate. (*Berl. Phil. W.* April 26, 1902.)

TORTOSA. — **Ancient Moulds.** — In *B. M. Soc. Ant. Fr.* 1900, pp. 317–323, A. HÉRON DE VILLEFOSSE describes thirty-six steatite moulds found about 1894 at Tortosa, in Syria, and now in the Louvre. They were made to be used in casting various domestic utensils. Two other steatite moulds, found in Egypt, are published (cuts) by the same scholar, *ibid.* 1901, pp. 244–249.

TYRE. — **Roman Officials in Egypt.** — In *B. M. Soc. Ant. Fr.* 1901, pp. 228–231, A. HÉRON DE VILLEFOSSE publishes the following inscription, found at Tyre: Τ(ίτωι) Φουρίω Οὐκτωρείω, ἐπάρχωι Αἰγύπτου; ἐπάρχωι πραιτωρίων, Φορτουναῖος, Σερίω[v] ἀπελ(εύθερος), ἀρχιταβλάριος Αἰγύπτου καὶ ἐπίτροπος προσόδων Ἀλεξ[ανδρείας]. T. Furius Victorinus is the praetorian prefect of Marcus Aurelius and Lucius Verus, who was killed in 167 A.D. That he was prefect of Egypt is now learned for the first time. The title *architabularius Aegypti*, of the Fortunatus who dedicated the inscription, is new. *Ibid.* pp. 322 f., the reading Σερίων is corrected to Σεβαστοῦ. Fortunatus was then a freedman of the emperor Antoninus.

ARABIA

PHILADELPHIA.—**Greek and Latin Inscriptions.**—In *B.C.H.* XXIV, 1900, pp. 575–581, V. CHAPOT publishes twelve Roman milestones from the road leading north from Philadelphia (Amuran). Three of these were previously unpublished. Most of them show the names of Severus or Caracalla; one, the titles of Hadrian; another, the name of Pertinax; and a third, in Greek, the name of Julian. Chapot also publishes three Greek inscriptions, two sepulchral, and the third recording the erection of ἡ ἀψὶς τοῦ ἡμισφείου, apparently the wall enclosing the choir of a church.

ASIA MINOR

DR. BELCK'S EXPEDITION.—On the way to Comana, Cappadocia, Belck found at Ekvek a Hittite inscription never before seen by any European, though its existence was known. This is the third new Hittite inscription he has found. At Schahr the ancient ruins, most important among which are a well-preserved temple and an amphitheatre, were examined. Comana (Schahr) was found to be, not a Hittite foundation, but probably a foundation of the Indo-European Cimmerians, therefore not more than about twenty-six hundred years old. On the way back to Azizieh seven Roman milestones and five rock-cut Greek sepulchral inscriptions were found. At Gürün the two Hittite inscriptions cut in the rock were copied, and better readings were obtained. At Palanga the Hittite inscription already known was collated, and here also better readings resulted. Further to the southwest, the two lions at Arslan Tasch were visited. They do not mark the entrance to a Hittite palace, but are boundary stones of a Hittite kingdom, probably that of Tyana. Thence the route passed through Siwas and Tokat to Amasia and Samsun. Excavations are to be undertaken. (*Berl. Phil. W.* April 26, 1902. On the previous discoveries of this expedition, see *Am. J. Arch.* 1902, p. 63.) Belck's discoveries are briefly described by HILPRECHT, in *S. S. Times*, May 17, 1902, where a photograph of the inscribed Hittite stele found at Boghehe, near Kaisariyé, is published.

BITHYNIA.—**Inscriptions.**—In *B.C.H.* XXIV, 1900, pp. 361–426, G. MENDEL begins the publication of 'Inscriptions de Bithynie.' The article is divided into eleven sections: I. Broussa, Nos. 1–11. II. Broussa to Cius, Nos. 12–21. III. Cius, Nos. 22–26. IV. North Bank of the Lake of Iznik, Nos. 27–43. V. Iznik and Its Neighborhood, Nos. 44–62. VI. The Sakkaria between Lefké and Geivé, Nos. 63–72. VII. The Region of Goelbazar, Nos. 73–100. VIII. Left Bank of the Sakkaria between Déré-keui and In-hissar, Nos. 101–105. IX. From the Sakkaria to Tarakly and Boli, Nos. 106–118. X. The Plain of Boli, Nos. 119–134. XI. From Boli to Viran-chéhir, Nos. 135–143. The journeys, on which these inscriptions were collected, were taken in the summers of 1899 and 1900. There is little description or discussion, but it is suggested that Basilinopolis is to be sought near Bazar-keui. Most of the inscriptions are of the usual Asia Minor types, and many of them fragmentary. Nos. 5, 12, 49, 50, 61, and 62 are in Latin, Nos. 12, 61, and 62 being bilingual epitaphs in Greek and Latin. Nos. 7, 9, 27, 76, 105, 117, 121, 136, and possibly 20, are metrical. No. 27 contains two epitaphs, each of four elegiac couplets, separated by ἄλλο, like the epigrams in the Anthology, in honor of a certain Menas who fell in the

battle of Coroupedium in 281 B.C. No. 111, a sepulchral fragment, seems to have contained a provision for the *ῥοδισμός*.

The publication is continued in XXV, 1901, pp. 5-92: XII. The Plain of Viran-chehir, Nos. 144-159. The inscriptions show that Kiepert and Ferrot were right in seeking here the site of Hadrianopolis. The acropolis and necropolis can be identified, but there are few traces of the ancient city. The full name in the second century seems to have been Caesarea Hadrianopolis, which may indicate that it was rebuilt by Hadrian. The scanty information as to the history of the city is collected and discussed. In the second century it belonged to the province of Galatia, as is shown by an inscription in honor of Julius Scapula, who was legate of that province in 138 A.D. Of the other inscriptions, four are in honor of emperors, and the rest sepulchral. Nos. 149, 154, 157, and 158 are metrical. XIII. From Viran-chehir to Zafaramboli, Nos. 160-172. These include dedications to Zeus *Κιμιστηνός*, *Ἐπήκοος*, and *Ἐπικάρπιος*, and *Θεὸς ὕψιστος*. The others are sepulchral, Nos. 160, 164, 165, 166, and 169 being metrical. At Achagakeui are many ancient remains, including some reliefs. XIV. Zafaramboli, Nos. 173-174. XV. From Zafaramboli to Bartin, Nos. 175-176. XVI. Bartin and Amasra, Nos. 177-184. One of these is in honor of Septimius Severus, Caracalla, and Geta, another is a dedication to *Δὴ μεγάλῳ Σδαλείῳ*. Bartin is probably the site of the ancient Parthenia. XVII. The neighborhood of the Filios, Nos. 185-190. The ruins of the ancient Tieion have been accurately described by von Diest, except in two points,—his theatre seems to have been a temple or a bouleuterion, and the walls of the acropolis are a reconstruction of the fourteenth or fifteenth century. In the plain near by are four large arches which seem to be remains of an aqueduct. Nos. 188 and 189 are in Latin, on milestones of Vespasian and Titus, and Constantine. Their relation to the roads of the region is discussed. XVIII. From the Filios-tchai to Heraclea, Nos. 191-192. A metrical epitaph and a dedication to M. Aurelius. XIX. Heraclea Pontica, Nos. 192 (*bis*)-195. XX. Akteche-chehir, Nos. 196-199. The inscriptions confirm the identification of this place with the ancient Dia or Diospolis. XXI. From Akteche-chehir to Ada-bazar, Nos. 200-205, of which one is a dedication to **Αργιστις*. XXI (*bis*). Uskub-kassaba (Prusias ad Hypium), Nos. 206-225. Some of these inscriptions show that there were two councils in Prusias,—one of archons and the other of phylarchs,—and it is probable that the word *ὁμόνοια*, the occurrence of which in these inscriptions has caused some discussion, refers to the concurrent action of these two bodies. Mendel discusses the importance of the route from Nicomedia to Amasis through the valley of the Hypius, with special reference to the campaign of 88 B.C. XXII. The Region about the Lake of Sabandja, Nos. 226-233. At the Armenian convent of Armacha is a relief of the Dioscuri and three sepulchral monuments.

CARIA. — **Inscriptions.** — In *B.C.H.* XXIV, 1900, pp. 329-347, G. CORSIK continues and concludes his 'Voyage en Carie.' He publishes eight fragmentary inscriptions found between Bouyouk-Ala-Fahraddin and Termessus. The route from Termessus to Aidin is briefly given, and eighteen inscriptions published, of which eleven are from Oenoanda. Most of these are dedicatory, sepulchral, or, at Oenoanda, honorary. Pages 346-347 and 616-617 contain corrections of an earlier article. (See *Am. J. Arch.* V, 1901, p. 335.)

CILICIA. — **Archaeological Notes.** — In *Jh. Oesterr. Arch. I. V*, 1902, pp. 106–111 (7 figs.; map), F. SCHAFFER briefly describes remains of ancient roads, buildings, and rock-cut graves seen in Cilicia in 1900 and 1901. Two late inscriptions are published. Views of the temple of Zeus and other remains at Olba are given.

CYZICUS. — **An Inscribed Base.**

— An inscribed base, sculptured with marine figures, has been for the first time cleared and completely copied. It records the restoration of the harbors and channels of Cyzicus, in the reign of Caligula, by Queen Tryphaena, a great-granddaughter of Mark Antony, whose history and connections are known from various other inscriptions. (F. W. HASLUCK, *J.H.S.* XXII, 1902, pp. 126–134.)

Inscriptions. — Among the fourteen inscriptions from Cyzicus published by C. SMITH and R. DE RUSTAFJAEILL in *J.H.S.* XXII, 1902, pp. 190–207, is a fragmentary sculptured slab showing a local form of the Mother of the Gods, Andeiris, already known by the name Andeirene, as a chthonian deity allied to Persephone. The most important inscription, which recounts the gifts conferred upon Cyzicus by Philetaerus, founder of the Pergamene dynasty, and gives his father's name as Attalus, makes the earliest, indeed a contemporary, mention of the Galatian invasion of 278 B.C. Another, an epitaph, contains the unusual form, *πατρώνης*.

EPHESUS. — **The Austrian Excavations.** — The Austrian excavations in Ephesus, after being stopped for some time, are shortly to be recommenced. Dr. Heberdey, who is to preside over the work, will employ about a hundred laborers in the harbor quarter of the Hellenic city, upon the site which was bought for the purpose a few



FIGURE 1. — BRONZE STATUE
FROM EPHESUS.

years ago by Professor O. Benndorf. The Vienna Archaeological Seminary has in preparation a work upon the great theatre of the Lysimachian period, which underwent extensive alterations during the Roman period. (*Athen.* July 12, 1902.) Among the objects found in the excavations, the most remarkable is the fine bronze statue, of the fourth century B.C., representing a youth (Figs. 1 and 2).

LESBOS.—**Inscriptions.**—In *Jh. Oesterr. Arch. I. V*, 1902, pp. 139–147, P. KRETSCHMER publishes a fragmentary inscription from Eresus, Lesbos, containing rules for the entrance to a temple or sanctuary. The forms of the letters indicate a date in the second or early part of the first century B.C. Three inscriptions on gravestones from Moria, near Mytilene, are also published.

MILETUS.—**The Excavations in 1899 and 1900.**—Two seasons' work at Miletus (1899–1900) is briefly reported by T. WIEGAND in *Arch. Anz.* 1901, pp. 191–199 (6 cuts). Among the important discoveries are the Hellenistic city wall, enclosing a larger territory than was supposed; the Bouleuterion, of the third century B.C., a theatre-like building similar to that at Priene, with altar-court, sculptures, and inscriptions; the Sacred Way, leading to Didyma, built by Trajan in 100 A.D.; and the fortification wall hastily erected against the invading Goths in 265 A.D. (See *Am. J. Arch.* 1902, p. 64.)

The Roman Fountain.—In *Berl. Phil. W.* April 26, 1902, is a description, from the *Kölnische Zeitung*, of the great Roman fountain in the market place at Miletus. This was adorned with 150 statues, 12 of which have been put together from the fragments found. The building had two stories, and was 19 m. in length. A large basin received the water, which then passed into a narrower basin, from which the people took it for their daily use. This is a structure such as the Romans called a septizonium or a nymphaeum. Other known structures of the kind are either not excavated or are destroyed.

PISIDIA, LYCAONIA, AND PAMPHYLIA.—**In-**

scriptions.—The inscriptions copied by W. M. RAMSAY and his assistants, on a recent tour in Pisidia and Lycaonia, are published by H. S. CRONIN in *J.H.S.* XXII, 1902, pp. 94–125. They run in date from Augustus to Caracalla or later, and show the attention paid to this region by various emperors.

RHODES.—**A Danish Expedition.**—In *Athen.* March 29 and April 12, 1902, it is announced that a Danish expedition under the leadership of Dr. Blinkenberg is to excavate at Lindus, on the island of Rhodes. The expenses are to be defrayed by the Carlsberger Fund.

Three Inscriptions.—In *Jh. Oesterr. Arch. I. IV*, 1901, pp. 159–168 (2 cuts), F. HILLER VON GÄRTRINGEN publishes four inscriptions—three from Rhodes, and one from Tenos. The first Rhodian inscription confirms



FIGURE 2.—HEAD OF BRONZE STATUE
FROM EPHEBUS.

the fact, otherwise attested, that the Boule and Prytanes of the Rhodians were reorganized every half-year. The ship called *Εὐανδρία* is mentioned. The second Rhodian inscription is sepulchral, and includes three fragments. The names mentioned show that foreigners found a ready welcome at Rhodes. The third Rhodian inscription, described by C. T. Newton (*Travels and Discoveries*, I, 1865, p. 167), is published from a copy in the Museo Civico at Venice. The inscription records honors conferred by the Rhodians on Anaxibius, son of Phidianax. On the inscription from Tenos, see below.

SYME.—*Inscriptions.*—In *Jh. Oesterr. Arch. I.* V, 1902, pp. 13–20, E. HULA publishes, from the manuscript of D. CHAVIARAS, six inscriptions from Syme. Four are from gravestones. One of these consists of four elegiac distichs. Two are parts of honorary decrees of the second century B.C. In both the *Heracleia* are mentioned.

YORTAN.—*Excavations in the Necropolis.*—In *C. R. Acad. Insc.* 1901, pp. 810–817 (2 pls.), M. COLLIGNON gives a brief report of excavations by Paul Gaudin in the prehistoric necropolis at Yortan, near the upper valley of the Caicus, in Mysia. The bodies were buried in large jars, placed nearly horizontally, with the opening toward the east. Besides remains of bones, the jars contained a few gold ornaments, bronze bracelets, pins, and utensils, and arrow heads and spear heads similar to those found in Cyprus, stone whorls, utensils, and idols, the latter resembling those from Hissarlik and the Cyclades, and vases of various technique. Some of the vases were rude, hand-made ware, others of more advanced workmanship; some of red ware, others of black, like Italian bucchero. Many of the forms resemble those found in Cyprus. The decoration is chiefly geometrical and incised, but geometrical painted decoration is also found, as well as decoration in relief. The presence of bucchero is important, showing that this kind of ware was native in Asia Minor. The date of the necropolis is probably between 2000 and 1500 B.C. Whether the people whose dead were buried here were Mysians is uncertain.

THRACE AND SCYTHIA

RUMELIA.—*Latin Inscriptions.*—In *B.C.H.* XXIV, 1900, pp. 542–552, P. PERDRIZET publishes ‘Trois Inscriptions Latines de Roumélie.’ I. An epitaph erected by Fl. Gemellus in memory of his two nieces, who had come from farthest Gaul to Macedonia to visit him, but died on their way home. The inscription throws light on the favorable conditions for travelling, under the Empire, since it was possible for two young girls to take so long a journey, and is marked by a tone of tender affection. II. A corrected text and notes on the epitaph of a young slave, already published by Cumont in his ‘Inscriptions de Macédoine’ (*R. de l'instr. publ. en Belgique*, 1898, and separately). III. Part of the inscription on a milestone near the village of Kovatchevitza. It comes from a region as yet unexplored, and indicates the existence of a hitherto unknown Roman road, which connected Philippopolis with the Egnatian road, by way of Rhodope, Nicopolis ad Nestum, and the Boz-Dag. The probable course of this road is briefly discussed.

CONSTANTINOPLE.—*A Roman Soldier.*—In *Jh. Oesterr. Arch. I.* IV, 1901, pp. 207–208 (1 half-tone; 1 cut), FRANZ FREIHERR VON CALICE publishes a sepulchral monument now in the garden of the British Embassy

at Constantinople. The person commemorated was one Nigrinus, a soldier of Cohort XI *urbana*. The date is probably the reign of Trajan.

SERVIA. — Inscriptions. — In *Jh. Oesterr. Arch.* I. IV, 1901, Beiblatt, pp. 72–162 (10 half-tones; 74 facsimiles of inscriptions), FRIEDRICH LADEK, A. v. PREMERSTEIN, and NIKOLA VULIĆ continue the report of journeys in Servia from *Jahreshefte*, III, Beiblatt, pp. 105–178. The inscriptions, some of which here given in facsimile have been less adequately published elsewhere, are chiefly sepulchral and votive, and many of them are of value for the history of the Roman legionaries. Of especial interest is the long one, pp. 83 ff., which gives the names of *veterani* from the *Legio VII Claudia*. This supplements the discussion in *Jahreshefte*, III, Beiblatt, pp. 115 f. A few notes from the southern part of Servia (pp. 162–168; 4 figs.), which include three sepulchral inscriptions and an inscribed tile of late date, are added by TIHOMIR R. GJORGJEVIĆ.

GREECE

ÆGINA. — A Votive Relief. — In 'Εφ. 'Αρχ. 1901, pp. 113–120 (pl. vi), SAM WIDE publishes a relief found at Παλαιὰ Χώρα, Ægina, July 19, 1901. It represents an offering to Artemis. At the left stands an altar on four steps. The top of the altar rises in the form of horns. Close to the altar a man holds a bird (goose or duck) in his hands, while a second man pours a libation. Four fully draped female figures, of different sizes, follow the men. One of them leads a stag. The figure of Artemis, holding two torches, is cut in very low relief close beside the altar, and is partly, as it were, hidden by the men. The work belongs to the latter part of the fifth century B.C., and shows the influence of the sculptures of the Parthenon.

AMPHISSA. — Two Decrees of Proxeny. — In *B.C.H.* XXV, 1901, pp. 221–240, W. VOLLGRAFF publishes two decrees of proxeny from Amphissa, which are engraved on the same stone. Of the first, only the last three lines are preserved, but these contain the name of the boularch Lysipinos, who is known from Delphian inscriptions, which can be dated in the early part of the second century. The office of boularch is known in Stratos, in Acarnania, Ozolian Locris, the region about Mt. Oeta, Dyme in Achaia, and Daulis in Phocis. From a study of all the documents, the conclusion is reached that this was not a municipal office, but the presidency of the district council under either the Etolian or Achaean league. A brief account of the use of this title in Asia Minor is added. The second decree is in honor of the physician Menophantos, and is preceded by a letter of the Amphissians to the Scarphians, sending them a copy of the decree, at the request of Menophantos. As the decrees in honor of physicians have not been collected, Vollgraff adds a list of those known to him.

ATHENS. — Restoration of the Erechtheum. — It has been decided by the Director-General of Antiquities and the Minister for Ecclesiastical Affairs and Education, Dr. Antonio Monferrato, to undertake the restoration of the Erechtheum. The following official order has been issued:

(a) (In the north portico) in the third column from the east, the third drum, which is partly destroyed, will be replaced to a height of 0.60 m.; also the fourth drum will be replaced to the extent of half its diameter and about the same height.

(b) In the northwest corner column the fifth drum will be partly replaced, and a new sixth drum will be added. For this purpose, use will be made of

the blocks lying near the Erechtheum, which were prepared for this purpose during the previous restoration (about the middle of last century).

(c) In the west column the missing portion of the fourth drum will be inserted, and the damaged portions of the fifth and sixth replaced.

(d) The marble beams of the roof (of the north portico) will be replaced in their original position, supported by iron girders extending under their whole length; these iron girders will be concealed by marble slabs, 3 cm. to 4 cm. thick, placed beneath them.

(e) All the other architectural members of the same portion will be replaced in position, and fixed with iron cramps and rivets. Any missing panels of the roof will be replaced by thin slabs of plain marble.

(f) As the weight of the beam above the door might be too heavy for the broken lintel to support, an iron girder must be placed on the top of the wall, immediately under the beam.

(g) The west façade of the temple shall be partly restored by replacing in position the extant columns and capitals concerned, and completing them, where necessary, by new pieces of marble.

This work will be entrusted to the Greek architect, N. Balanos, who will consult the Director-General of Antiquities on all archaeological matters.

The work on the Erechtheum will soon begin; meanwhile, Balanos is to be sent to report on the project for strengthening and partly restoring the temple of Apollo Epicurius at Bassae, near Phigalia. This isolated temple is much damaged, and requires immediate attention.

The approval which Balanos's work on the Parthenon has received from the Directors of the foreign Archaeological Schools, and also from Mr. Penrose, is a guarantee of the success of his similar undertaking in the case of the Erechtheum and the temple at Bassae. (Letter of S. P. LAMBROS to the *Athen.*)

The restorations proposed for the Erechtheum are not in themselves a serious matter. In part they are probably, like the restorations now going on at the Parthenon, necessary for the stability of the building. The rebuilding of the north porch and west façade is a new departure, so far as the new *régime* is concerned. It is, however, a continuation of the rebuilding of the Erechtheum which took place between 1840 and 1850, and the columns on the west façade were blown down by a storm subsequent to that restoration. Where so much has already been done to the building in recent times, a little more or less may not matter very much; but it is to be hoped that this project is not the beginning of a scheme for rebuilding other Greek buildings, such as the Parthenon itself, from a mixture of ancient and modern materials. (*Athen.* May 24, 1902.)

Lead Medals.—In *Ἐφ. Ἀρχ.* 1901, pp. 119–122 (pl. vii), K. D. MYLONAS describes and publishes fourteen Attic lead medals (*symbola*) found in the excavations of the stoa of Attalus, in May, 1898. The types are various, most of them representing deities. All are of imperial Roman times, and all are cast.

Meetings of the French School.—The following papers were presented at the Institut de Correspondance Hellénique, during the winter of 1900: January 3. Demargue: 'Discoveries in Crete: Itanos.' Homolle: 'The Fountain of Castalia.'—January 17. Mendel: 'Archaic Relief from Thasos, representing Aphrodite.' Homolle: 'Inscriptions of Delphi containing

Liturgical Regulations.'—January 31. Demargne: 'Discoveries in Crete: The Acropolis of Goulas.' Homolle: 'Topography of Delphi; from the Treasuries to the Great Altar.'—February 21. Mendel: 'A Relief on an Ancient Gate of Thasos.' Homolle: 'Topography of Delphi; from the Great Altar to the Lesche and the Theatre.'—March 7. Clon Stephanos: 'On the Ethnology of Greece.' Homolle: 'Some Specimens of Archaic Ionian Architecture found at Delphi.'—March 21. Homolle: 'Lysippus and the *ex-voto* of Daochos at Delphi.'—April 4. Seure: 'Reconstruction of a Chariot found at Philippopolis.' Homolle: 'The Dancing Caryatides of Delphi.' Most of these papers have appeared, or will appear, in the *B.C.H.* (*B.C.H.* XXIV, 1900, p. 616.)

CRETE.—**Ancient Theatres.**—In *Biblia*, February, 1902, pp. 351–353, is a short article on 'Ancient Theatres in Crete,' in which the *Builder* (London, December 7, 1901) is quoted as giving extracts from old letters and plans, now in the Ambrosian library at Milan, which date from the time of the Venetian occupation of Crete. Some of the plans represent theatres. With the letters are copies of inscriptions.

THE WESTERN PROVINCES OF CRETE.—Volume XI, Part 2, of *Mon. Antichi*, pp. 285–550 (with index; 7 pls.; 164 cuts, and many facsimiles of inscriptions), records the results of a new exploration, without excavation, of western and southwestern Crete, by L. SAVIGNONI and G. DE SANCTIS. Among the places visited are Aptera, the Dictynnaeum, the almost inaccessible Polyrhénion and its no less difficult port of Phalasarna. The sites of Lyttus and of Calamyde are discussed. Owing to the isolated situation of the southern coast of this end of the island, and its backward civilization, it is difficult to set dates. Some positions are certainly Mycenaean; others, with primitive polygonal masonry, have Hellenistic or Roman remains. Some Attic vases, of the early part of the fifth century B.C., show at least one definite point of contact with the world. Chamber-tombs, trench-graves, and burial in horizontal earthen jars occur. Beside the necropolis of Phalasarna stands a huge throne, cut in the native rock and with a column carved on the back, which is certainly one link in the chain connecting the Amyclaeian Apollo with the primitive religion of the Mediterranean.

CNOSsus (CRETE).—**Excavations in 1901.**—In the *Annual of the British School at Athens*, No. VII, session 1900–01, pp. 1–120 (2 pls.; 38 figs.), is the report of A. J. EVANS on his excavations at the palace of Cnossus in 1901. The palace was nearly square, and the arrangement of its many apartments shows great skill on the part of the architect. Many apartments were excavated during this year, and parts of the building excavated in 1900 were more thoroughly explored. Parts of the palace were at least three stories high. The western court outside the palace walls must have formed the gathering-place, or *agora*, for the citizens of Mycenaean Cnossus. Many clay vases were found, some of good Kamares ware, others of inferior workmanship continuing the traditions of Kamares ware in the Mycenaean period, and others of Mycenaean style. On one vase of the inferior late Kamares ware was a *graffito* inscription in linear characters like the ordinary linear script of the Mycenaean period. Many fragmentary frescoes and colored stucco reliefs were found, some of them of remarkably fine workmanship. One series represented men and also women in contest with bulls. The costumes indicate that the contests were held in the arena. Such

combats may have been fought by captives for the pleasure of the Cnossians, and the story of the sacrifice of Athenian youths and maidens to the Minotaur may have had some foundation in fact. Other fragments belong, apparently, to a picture of a boxing match. Other colored reliefs seem to have represented processions, and others were purely architectonic. The pattern of one of these resembles that of the frieze at Tiryns containing blue glass.

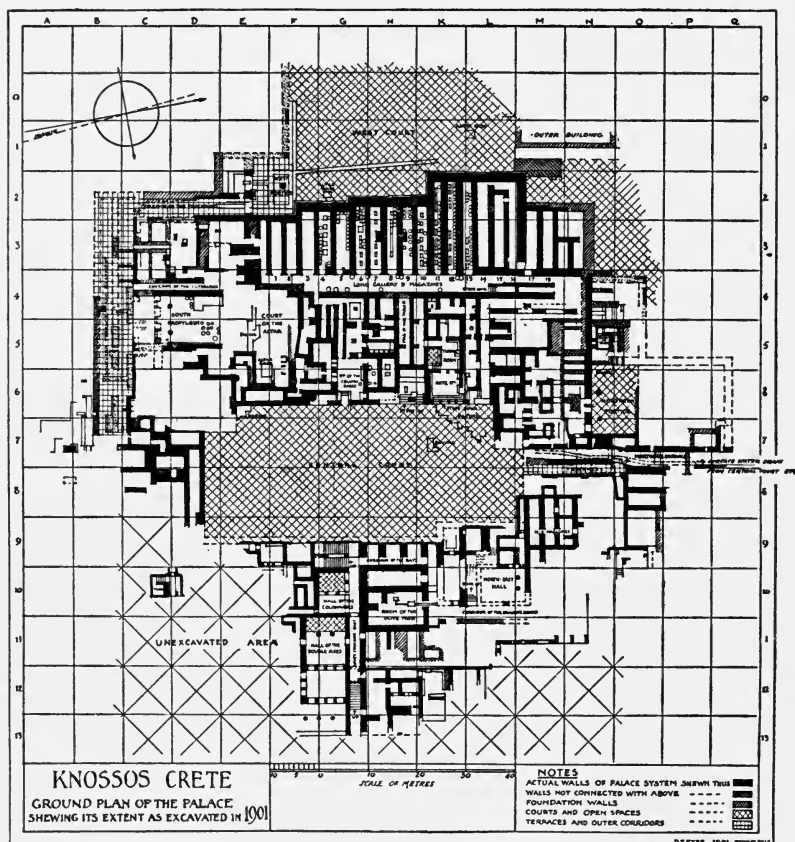


FIGURE 3. — PLAN OF THE PALACE AT CNOSSUS.

Some of the frescoes represented scenery in a realistic manner. Many clay impressions of seals were found, several of which represent a man with a bull's head. There are many proofs that various trades were carried on in the palace; so in one room a stone vase was found unfinished, and beside it a large stone amphora, adorned with spiral designs, which had evidently never been removed from the workshop. In another room various unfinished objects were found. Many fragments of impressions from a signet-

ring show that the seal represented a goddess, standing on a mountain, guarded by two lions. The goddess holds a bow. Before her is a male worshipper, behind her an altar with horns. Other seals were also of a religious character. A clay matrix of one seal was found, evidently a counterfeit of a gold signet. Some deep walled pits were probably the palace dungeons. In one of the galleries a small gold lion was found, the limbs and body of which were finely modelled. It may be compared with the finest Etruscan jewellery. Two baths similar to that in the "throne room" were found, one of which was much larger and deeper than the other. An alabaster lid with the cartouche of the Hyksos king, Khyam, shows some connection with Egypt about 1800 B.C. An interesting object is a gaming board of ivory, incrustated with gold, and inlaid with crystals backed alternately with silver and blue glass paste (*kyanos*). The border is formed by a series of daisies, and in the upper part of the board were beautiful nautilus reliefs. Ten disks evidently serve to fix the moves of the game. Parts of a stone bull carved in the round, and of bone plaques inscribed with signs resembling those of the Greek alphabet and also signs found in Egypt, were discovered in a conduit. A very great number of inscribed tablets came to light in the palace. The inscriptions seem to have to do with accounts of some kind. This report is still provisional, but is the most exhaustive yet published. The importance of the palace at Cnossus is made more and more evident.

Further Excavations. — In *Biblia*, July, 1902, pp. 109-114, A. J. EVANS gives a brief account of discoveries in the palace at Cnossus in the current year. An impression of a Babylonian cylinder shows direct connection with the East. Many rooms were cleared, and parts of the palace excavated in 1901 were more carefully explored. A shrine in the southern part of the palace throws some light on the local cult. "On a small dais, beside a tripod of offerings, and with a miniature votive double axe of steatite before her, rose a painted terra-cotta figure of a goddess, pillar-shaped below according to the old religious tradition, and with a dove on her head, while in front of her stood a male votary holding out another dove." The association of the goddess and the double axe is also evident from a gem on which the goddess holds the double axe in her hand. A mosaic which represented scenery arranged in zones was found. Among the scenes is an attack upon a city, the houses of which are three stories high and have windows with divided sashes, indicating the use of some substitute for glass. An account of the excavations of 1901-02 is also given by LOUIS DYER in the *Nation*, June 5, 1902, and a brief account, taken from the *Journal des Débats*, is printed in *Chron. d. Arts*, May 24. At a meeting of the Hellenic Society, July 1, A. J. EVANS gave an account of his season's work, a summary of which is in *Athen*, July 5, 1902. In addition to objects referred to above, Mr. Evans mentioned remains of ivory figurines carved in the round. The limbs were jointed together, and the figures seem to have represented youths in the act of springing. The hair was indicated by spiral bronze wires, and the quantity of gold foil found with them indicates that they were, in part at least, gilded. In the *Nation*, July 3, 1902, is a summary of a paper by Mr. Evans, in the course of which he exhibited the types for printing the prehistoric script found in Crete and explained the progress made toward deciphering the inscriptions.

GORTYN (CRETE).—**Italian Excavations in 1900.**—In *Rend. Acc. Lincei*, 1901, pp. 291–306, is a report by F. HALBHERR on the work of the Italian archaeologists in Crete during the summer of 1900. At Gortyn, trenches were opened covering about one-third of the *agora*. A large rectangular building of Hellenic or Hellenistic period was discovered; this was partly destroyed by the later theatre. Some of the stone blocks are inscribed with laws. Near the theatre, statues of Asclepius and Aphrodite were found. In the theatre a system of drains was discovered, but the excavation was soon flooded, and further work was impossible. The Roman pavement of the *agora* was laid bare. Remains of a large *stoa* were found, and inscriptions came to light that attest the existence of a temple of Asclepius.

At Labena, the port of Gortyn, the temple and precinct of Asclepius were excavated. Besides the cella of the temple, a *stoa*, a *nymphaeum*, and the temple treasury were brought to light. The temple is of the imperial period, the *stoa* and treasury earlier. The walls of the temple were inscribed with regulations and with the cures effected by the god.

PALAEOKASTRO (CRETE).—**Excavations.**—At a meeting of the Hellenic Society held July 1, R. C. BOSANQUET gave an account of his excavations at Palaeokastro, near Sitia, in eastern Crete. Interesting remains of Mycenaean houses had been discovered, and numerous tombs investigated, with some very interesting results in painted vases. (*Athen.* July 5, 1902.)

ZAKRO (CRETE).—**Excavations in 1901.**—In the *Annual of the British School at Athens*, No. VII, Session 1900–01, pp. 121–149 (3 pls.; 20 figs.), D. G. HOGARTH describes his excavations at Zakro, in eastern Crete. The chief discoveries were at Kato Zakro, on two spurs of the hills, near the sea. Here were remains of houses, and in two pits were many vases, lamps, and other clay objects, a few stone vessels, a few fragments of bronze pins and blades, and three obsidian flakes, but no trace of iron. The houses contained several rooms, one as many as eighteen. In the houses were vases, seals, and bronze implements. In one house was an object, probably an altar. In the pits the pottery was late Kamares ware and Mycenaean ware mingled. No Kamares ware was found above the floors of the houses. The seal impressions are Mycenaean of the best period, for the most part, though some are late Mycenaean. Some of the types have intimate relations with the Acropolis graves at Mycenae and still more intimate relations with types found at Cnossus. The settlement at Kato Zakro was probably made by Cnossian colonists for the purpose of trade with Libya. It ceased to exist before the beginning of the Iron Age. At various points about Epano Zakro, higher up among the hills, remains of very early buildings were found. Graves were found in caves, and the objects found with the remains of corpses indicate that the persons buried here belonged to an indigenous race somewhat affected by the Kamares culture and the Mycenaean civilization. The ornamentation of some of the vases differed from that of Kamares ware, though the burials to which these vases belong must be assigned to the early part of the Kamares period. Skulls from these cave burials are discussed by W. BOYD DAWKINS, pp. 150–155 (1 pl.), who thinks that they “belong to the small dark Mediterranean people, the oldest, if not the only, ethnical element in the Pelasgians of Crete.”

DELPHI.—**A Signature of Cephisodotus.**—Among the inscriptions found in the circular temple at the Marmaria in Delphi is a base containing

a dedication to Athena Pronaia, and below a fragmentary signature, which is restored by TH. HOMOLLE as [Κηφισ]όδοτος Ἀ[θηναίος ἐπόησεν]. The character of the writing and the date of the important works in this sanctuary make it probable that the elder Cephisodotus is meant. (*B.C.H.* XXV, 1901, p. 104.)

A Decree passed under Euboulidas. — *B.C.H.* XXIV, 1900, p. 541, contains a Delphian decree from the archonship of Euboulidas. T. HOMOLLE points out that the names of the bouleutae are common in the fourth century, and that Pontow's date (310 B.C.) for this archon is probably near the truth.

The Worship of Pan. — In *B.C.H.* XXIV, 1900, p. 581, TH. HOMOLLE publishes a fragment of a dedication by the Prytanes of Delphi to Pan. The god appears on some Delphic coins and his cult has been connected with the repulse of the Gauls.

ERETRIA. — A Golden Diadem. — A tomb lately opened near Eretria belonging to the third century B.C. contained the usual gifts to the dead, such as painted vases, personal ornaments, etc. The most important is a diadem which encircled the hair of the dead. It consists of a narrow band of gold, bearing in its centre a head of Melpomene in relief. The relief had been fastened to the diadem with four nails, and was found to conceal the earlier and original ornament of the diadem, a head of Pan. It may be assumed, therefore, that in that epoch such ornaments were not invariably made for the dead, and that in this case the kinsfolk had bought and utilized a second-hand diadem, but, regarding Pan as unfit for their purpose, had substituted Melpomene in his stead. (*Athen.* June 28, 1902.)

PARNASSUS. — A Cicada. — In *Athen.* June 28, 1902, it is stated, on the authority of the *Vossische Zeitung*, that Skias has found, in excavations on Parnassus, the first golden cicada as yet discovered in Greece. This is regarded as a proof that the early Athenians wore golden cicadae in their hair as stated by Thucydides.

TEGEEA. — Excavations. — The excavations commenced in 1879 by Dörpfeld and Milchhöfer upon the site of the temple of Athena Alea at Tegea, in Arcadia, are now being continued by the French School in Athens, under the direction of Dr. Mendel. Fragments have come to light of the sculptured boar-hunt ascribed by Pausanias to Scopas. The torso of a woman with a short chiton is assumed by Dr. Mendel to have belonged to the Atalanta; a head terribly damaged is a remnant of the Heracles; and a part of one of the hounds has been discovered. A beautiful head, excellently preserved, is attributed to the statue of Hygieia, which, according to Pausanias, was next to that of Athena. A few small bronzes, similar to those found at the German excavations in Olympia and the American in the Heraeum of Argos, have also been unearthed. The excavations of the French School are to be continued during the winter, and will probably be extended towards the Stadium and the temple of Athena Polias. (*Athen.* Jan. 25, 1902.)

TENOS. — Bilingual Inscription. — In *Jh. Oesterr. Arch.* I. V, 1902, pp. 149-151, O. HIRSCHFELD publishes the following inscription from Tenos: *C. Iulius Naso | praef(ectus) tesserar(iarum) | in Asia nav(ium). | Γάιος Ἰούλιος Νάσιων ὁ ἐπὶ τῶν τεσσαραρίων ἐν Ἀσίᾳ | πλοίων.* The *tesserae naves* were probably despatch-boats, which we now learn were organized under a prefect. The date is the time of Augustus.

The Quaestor Varus.—In *Jh. Oesterr. Arch. I.* IV, 1901, pp. 159–168, F. HILLER V. GAERTRINGEN publishes with three Rhodian inscriptions (see above), an inscription from Tenos mentioning P. Quinctilius Varus as Quaestor (*ραμίας*), no doubt of Asia.

INSCRIPTIONS FROM VARIOUS PLACES.—In *R. Ét. Gr.* XV, 1902, pp. 132–142, A. E. CONTOLEON publishes six inscriptions from **Ithaca**, two from **Amphissa**, nineteen from **Phocis**, ten from **Attica**, three from **Aegina**, one from **Sparta**, two from **Kalamata**, three from **Lemnos**, one from **Tenos**, and one from **Berhoea**, in Macedonia. One of the Ithacan inscriptions, of Roman date, mentions the name of the island. Two of the inscriptions from Lemnos mention archons, who appear to be Lemnian, not Athenian. The inscription from Berhoea is in honor of Lucia Aureliana Alexandra, who was priestess of Artemis Agrotera in 169 A.D. The worship of this goddess at Berhoea is here attested for the first time. The other inscriptions are very brief and for the most part fragmentary. Two inscriptions, from Aenus and Trajanopolis, in Thrace, are added, pp. 142–143. Neither seems to be important.

ITALY

DISCOVERIES IN ITALY IN 1901–1902.—Nothing of exceptional interest has come to light in Italy during the past year. Old Greek and Sicilian tombs have been examined at **Gela**, **Caltagirone**, **Syracuse** and elsewhere in Sicily. Among the objects found in the former are a large terra-cotta sarcophagus with Ionic columns at the corners inside, and a bust of Diana of a form usually attributed to the time of the Antonines in a grave with coins of Hiero II. Further evidence continues to come in, but nothing revolutionary, as to the distribution of chamber-tombs and of cremation and inhumation. Cremation of the oldest period occurs in southern Italy, while in many parts of central Italy very ancient inhumation alone occurs. The necropolis at **Este**, with its four or more periods of old Venetian civilization, shows cremation in the oldest stratum. At **Norba**, where the attempt to ascertain the age of the fortified places of middle Italy is being especially pushed, a third temple, that of Diana, has been unearthed on the greater acropolis, and the circuit wall is found to be not older than the Roman colony of 262 B.C., but evidence as to a cemetery is still lacking. At **Civita Castellana** is a building with elaborate terra-cotta trimmings, probably a dwelling house. From **Pompeii** come a fifth century Greek votive relief, an Italian Doric column of the same epoch, a half-size bronze Mercury of the same school as last year's Ephebus, and among the wall paintings, a Toilette of Venus of a new type, where the goddess, seated and attended by Psyche, recalls the Venus of Capua. A row of shops on the Sarno, a kilometre from Pompeii, contains skeletons and all kinds of merchandise. In the **Roman Forum** the construction of Sta. Maria Antiqua and the excavation of the temple of Augustus go on. The lava pavement leading from the temple of Romulus is seen to be older than the temple of Venus and Rome and the Arch of Titus. There is the usual harvest of coins, sculpture, and remains of Roman buildings, at various points throughout the country. (E. PETERSEN, *Arch. Anz.* 1902, pp. 49–52.)

ALFEDENA.—**A Building and Tombs.**—In *Not. Scavi*, October, 1901, pp. 442–451 (2 figs.), L. MARIANI gives a general account of excavations at Alfedena in August, 1901. The most important discovery was a

large building on the acropolis, that must have existed as early as the fifth century B.C. In the same number of *Not. Scavi*, pp. 452-462, V. DE AMICIS describes in detail the tombs excavated during the same campaign, and the numerous implements and ornaments found in them.

ATENA LUCANA.—*Investigations in 1898.*—In *Not. Scavi*, 1901, pp. 498-505 (15 figs.), G. PATRONI gives the result of investigations at Atena Lucana in the summer of 1898. A well-constructed road and a piece of the acropolis wall were discovered. Several tombs were opened, containing vases; other vases, previously found, were secured for the Naples Museum.

ATRI.—*Piscinae.*—At Atri the *piscina* under the cathedral has been recently investigated. It is a quadrangular room with walls of heavy stone, built evidently in the republican period, and vault and columns of brick of the second century after Christ. The *piscina* under the palace, formerly belonging to the Duke of Atri, has also been studied. It consists of several rooms all of brick. At Porta Cappuccina there are several rooms connected with the water supply system, and in the same locality several ancient wells. (E. BRIZIO, *Not. Scavi*, 1902, pp. 4-13; 6 figs.)

BENE VAGIENNA.—*A Gate and a Building.*—Recent excavations at Bene Vagienna have brought to light a gate of the ancient town, and, in the neighborhood of the gate, remains of buildings with decorated rooms, a large drain with smaller ones leading into it, and the pavement of the road that passed through the gate. (G. ASSANDRIA and G. VACCHETTA, *Not. Scavi*, 1901, pp. 413-416; plan.)

CASTELLUCCIO DI PIENZA.—*Etruscan Tombs.*—Etruscan tombs have been recently opened at Castelluccio di Pienza, near Siena. The greater number are single rectangular chambers, approached by a corridor. The vases included a Villanova ossuary. (G. PINZA, *B. Paletn. It.* 1902, pp. 44-51; fig.)

ESTE.—*Early Tombs.*—In *Not. Scavi*, 1901, pp. 467-474 (5 figs.), A. ALFONSI describes a number of tombs recently excavated at Canevedo, a suburb of Este. Below one group of tombs was a deposit of vase fragments, and other remains of human habitation. G. GHIRARDINI, in a continuation of this article (pp. 474-480), calls attention to the importance of this discovery. These remains represent the first period of the civilization of Este, while the tombs above are of the third. The arrangement of these tombs, moreover, confirms the fact that this period was a long one,—an uninterrupted development from the latter part of the sixth to the beginning of the fourth century B.C.

GIRGENTI.—*Contents of Sicel Tombs.*—In *B. Paletn. It.* 1901, pp. 259-264 (4 figs.), P. ORSI describes various objects—an amulet in the form of a small hatchet, well-preserved vases, and a necklace—found in Sicel tombs of the first and third periods, near Girgenti.

NORBA.—*Excavations in 1901.*—In *Not. Scavi*, 1901, pp. 514-559 (plan; 32 figs.), L. SAVIGNONI and R. MENGARELLI describe excavations conducted at Norba during the summer of 1901. There was a careful but unsuccessful search for the necropolis. Attention was then given to the interior of the town, and first to the larger acropolis. The temple was dedicated to Diana, as is proved by a votive inscription. The plan of the temple was determined, and architectural fragments were found, including travertine columns and capitals, and pieces of terra-cotta ornamentation. It was

evidently a Roman building of the imperial period, but there are traces of an earlier temple of republican period, probably destroyed by Sulla's army. Many votive offerings of terra-cotta came to light, and other objects, of iron and bronze, including a bronze statuette, of fine workmanship, ascribed to the fourth century B.C. Adjoining the temple was a large building, of unknown use.

On the smaller acropolis the larger temple was first studied. Here two terra-cotta heads were found, dating, perhaps, from the sixth century B.C. Nothing earlier than this was found in the excavations. Fragments of the terra-cotta decoration of the temple were found in a neighboring well. In the smaller temple mediaeval tombs came to light, and it became evident that in the eighth and ninth centuries a part of the temple was used as a church and another part as a cemetery.

In the open space near the large eastern gate a Roman reservoir was excavated. The town wall was studied, and from vase fragments contained within it evidence was obtained that it is not so early as has been commonly thought. Northwest of Norba, remains of a contemporary settlement were studied, and other polygonal walls were examined near Sernioneta; connected with the latter settlement was a necropolis of the first iron age, where various objects have been found from time to time.

PADULA. — An Ancient Building. — In the summer of 1899, excavation at Padula, near the Certosa of San Lorenzo, brought to light columns and capitals of a large edifice. The fragments were not on the site of the building, and this could not be discovered. It was probably a sanctuary outside the walls of Consilinum, and the nature of the decoration suggests that it was a temple of Dionysus. (G. PATRONI, *Not. Scavi*, 1902, pp. 26-32; 5 figs.)

POMPEII. — 'The Murder of Neoptolemus.' — Among the newly discovered wall-paintings of Pompeii is one of the murder of Neoptolemus, at Delphi, which goes back to the same original as a vase-painting in Ruvo. (R. ENGELMANN, *Arch. Anz.* 1902, p. 13.)

POMPEII (TORRE ANNUNZIATA). — Results of Excavations. — The result of the excavations of Gennaro Matrone at Torre Annunziata is given by A. SOGLIANO in *Not. Scavi*, 1901, pp. 423-440 (plan). The work, begun in July, 1899, was continued, with interruptions, till February, 1901, and brought to light a portion of that suburb of Pompeii which was situated on the seashore. A row of shops was cleared, opening upon a portico. On the pilasters of the portico are various inscriptions. One shop, the only one containing wall paintings, evidently a *thermopolium*, is decorated with a picture of the god of the Sarno. In and near the shops were many skeletons, and a very large number of small objects was found, — gold bracelets and rings of fine workmanship, silver vases, bronze statuettes, many coins of gold, silver, and bronze, and other objects of various material in great abundance.

POZZUOLI. — Statue of a Priestess. — In *Gaz. B.-A.* 1902, pp. 348-351 (fig.), S. DI GIACOMO describes his discovery at Pozzuoli, in 1901, of a marble statue of a draped woman, apparently a priestess. The statue is good work, of the imperial period. At the same place was found a tomb containing two skeletons, one of which was a woman's. Both crumbled into dust on exposure to the air. With them were found a mirror, two spoons, and some lesser objects. The woman's skeleton was doubtless that of the priestess.

ROME. — Excavations in the Forum. — In *Cl. R.* 1902, pp. 94–96, THOMAS ASHBY, JR., gives a brief account of excavations in the Forum from June to December, 1901. On the southeast side of the temple of Saturn, foundations of *opus quadratum* may have belonged to an earlier form of the temple. A series of underground passages has been found below the area of the Forum. Investigations have been continued at the Basilica Aemilia, the temple of Castor, the Augusteum, Sta. Maria Antiqua, and the Sacra Via. On the Volcanal, see above, p. 78.

The account is continued in *Cl. R.* 1902, pp. 284–286, and brought down, apparently, to some time in May. Remains of what appears to be a triumphal arch, of late date, have been discovered at the south corner of the Basilica Julia, spanning the road that ran along its northwest side and the back of the temple of Castor and Pollux. That temple is found to have been peripteral. A wall of *opus quadratum*, at the west corner of the Augusteum, belongs, probably, to a *taberna* on the southeast side of the Vicus Tuscus. A drain, built in part of *opus quadratum*, runs diagonally across the Augusteum, from the middle of the southeast side, and joins the *cloaca* of the Vicus Tuscus. In the Atrium Vestae are two *piscinae*, one at the northwest end of the court, the other at the southeast end. The first is the smaller of the two. Under its cement floor a pavement belonging to the earlier house has been found. Other traces of the earlier house have appeared. In late times the colonnade of the Atrium was superseded by a wall with arches, remains of which are traceable. The cipollino columns were sawn into strips, and used for pavements and wall-facings. Various rooms have been cleared. In one is an oven; and in another a plate and an amphora are set in the mosaic floor so as to drain into a larger amphora below. At the west corner of the house three flights of stairs lead to the upper floor. In front of the temple of Antoninus and Faustina, foundations of earlier buildings have been found, together with additional fragments (a part of the head and a piece of drapery) of the statue of Faustina, which stood on a pedestal in the middle of the façade. Near the south angle of the temple, about 12 feet below the level of the Sacra Via, a tomb of the earliest Villanova period was found early in April. It contained a large *dolium* with a conical lid of tufa. Within this was an urn with a lid in the shape of a roof, with the rafters in relief. There were also several other pots. Within the urn were ashes and splinters of bones. This is the earliest monument yet found in the Forum, and must belong to a time before the amalgamation of the different settlements into one city. It is exactly like tombs found on the Esquiline, the Quirinal, the Viminal, and in the Alban cemeteries. [See LANCIANI, in *Athen.* May 17, 1902.] On the northeast side of the Sacra Via, between the temple of Antoninus and Faustina and the temple of Romulus, remains of a building consisting of a corridor with cells on each side have been found. It may have been a prison. Paving stones have been found *in situ* under the steps of the temple of Venus and Rome, about 10 yards northeast of the Arch of Titus. The course of the Sacra Via before the time of Hadrian is thus determined, but it is not necessary to assume that Hadrian moved the Arch of Titus. [See LANCIANI, *Athen.* 1902, p. 441.]

A New Athenian Sculptor. — Recent excavations in the garden of the Palazzo Barberini at Rome, in connection with building operations, have brought to light some twenty fragments of sculptured marble, among

them one small piece with the inscription ΦΙΛΟΞΕΝΟΣ ΑΘΗΝΑΙΟΣ ΕΠΟΗΙΣΕΝ (*sic*) in three lines on a rounded surface. This adds a twelfth to the list of known names of new-Attic sculptors. But it is impossible to tell to what sort of a work the fragment belonged, or to connect it with any of the other fragments thus far discovered in the same vicinity. (P. HARTWIG, *Röm. Mith.* 1901, pp. 366-371; 2 figs.)

The Baths of Caracalla.—Excavations in the baths of Caracalla throw much light on the system of drainage and heating and on the arrangement of underground passages by which the attendants passed from point to point. (T. ASHBY, JR., *Cl. R.* 1902, p. 286.)

Various Discoveries.—On the new Via Mecenate, between Via Merulana and Via Carlo Botta, remains of ancient structures, mosaic floors, architectural fragments, and ancient pavement have come to light. In the Rospigliosi garden, a room, previously discovered (see *Not. Scavi*, September, 1901), has been cleared; the floor is mosaic, and the north wall, with the ancient painting, is almost entirely preserved. Between the Piazza di Termini and Via Torino, ancient walls on which was constructed the great semicircle of the Baths of Diocletian; under these, two rooms hollowed out of the tufa; and a marble slab with a sepulchral inscription, of which *C.I.L.* VI, 9967, is a copy, have been found. At the corner of Via Piemonte and Via Sallustiana, 17 m. below the present level, three small rooms of an ancient house have been found. Near the Arch of Janus Quadrifrons, the double row of small rooms, recently discovered, has been excavated. (G. GATTI, *Not. Scavi*, October, 1901, pp. 418-423; 4 figs., including a plan of excavations in the Rospigliosi garden.)

In the construction of the new Via Mecenate, late brick walls and a mosaic floor have been found; also a mosaic floor probably belonging to some building in the Gardens of Maecenas. Ancient pavement has been uncovered at the corner of Via della Consulta and Via Parma, and in the Piazza delle Terme. Walls of *opus reticulatum* have been found on the site of the monastery of S. Bernardo. In Via Sicilia, work on the foundations of the new public school has brought to light brick walls and mosaic floors belonging to private houses. In the Velabrum another part of the subterranean building, recently discovered, has been exposed; this also consists of a double row of small chambers opening into a corridor; it is suggested that these rooms were used for the performance of religious rites and that this is possibly the *Doliola*. (G. GATTI, *Not. Scavi*, 1901, pp. 480-484; 2 figs.) Near the Via Labicana, about 15 km. from the city, remains of a fine imperial building have come to light. (G. TOMASSETTI, *ibid.* p. 484.)

By the Via San Stefano Rotondo, in the grounds of the military hospital, walls of brick and *opus reticulatum* and an ancient drain have been discovered. Remains of ancient buildings continue to appear in the work on Via Mecenate, and also at the corner of Via della Consulta and Via Parma. In the tunnel under the Quirinal a house with many sculptured and architectural fragments has come to light. [According to *Rend. Acc. Lincei*, 1902, p. 82, a marble head found here represents Pericles.] In the Piazza delle Terme an ancient wall of brick and travertine and a piece of a large granite column have been discovered. Ancient walls have been found in Via Sicilia and Via Boncampagni; and near the Piazza dell' Orca, two columns of cipollino. Under Via dei Fienili, on one of the tufa blocks

forming the vault of the Cloaca Maxima, a fragmentary republican inscription has been found. (G. GATTI, *Not. Scavi*, 1901, pp. 510-512.)

In Via San Stefano Rotondo ancient walls of private houses have been found. Here, and also in Via Merulana, ancient pavement has been exposed. In Via di Sta. Prassede, remains of a private house with decorated walls have been found. Two ancient drains have appeared under Via dei Cerchi. A large marble sarcophagus has been found under Via Flaminia. On Via Salaria, near the new church of the Carmelitani, walls of ancient *columbaria* have come to light, and sixteen sepulchral inscriptions, some complete and some fragmentary. (G. GATTI, *Not. Scavi*, 1902, pp. 15-20.)

TURIN. — **A Bronze Head of Tiberius.** — The *Scientific American*, June 7, 1902, publishes and describes, after the *Allgemeine Zeitung*, a fine bronze head of the Emperor Tiberius found at Turin, August 24, 1901. Traces of gilding are still visible. At the same place was found the torso of a marble statuette of Cupid. [See above, p. 82.]

Tombs, Arms, and Ornaments. — Near Turin several early tombs have been found, and near them various arms and implements of iron, ornaments of bronze, etc. (E. FERRERO, *Not. Scavi*, 1901, pp. 507-510; fig.)

VARIOUS DISCOVERIES IN SOUTHERN ITALY. — In *Not. Scavi*, 1902, pp. 33-48 (9 figs.), P. ORSI discusses a collection of bronzes found in early tombs at Spezzano Calabro, and now in the possession of F. E. Albani, of Cotrone. It includes *fibulae*, rings, spear-heads, knives, etc., and is evidently of Sicel origin. At Gerace, in the territory of the ancient Locri Epizephyrii, remains of Roman buildings and a Roman necropolis have been recently discovered. A large deposit of terra-cotta figures and vases, most of them fragmentary, has been found on the slope of the hill called Manella, possibly coming from a temple that stood on the summit. There is much evidence that this part of Italy, before the arrival of the Greeks, was occupied by Sicels. Several early Greek inscriptions have been found at Rhegium. Terra-cottas of the fifth century have been recently excavated at Rosarno, which is possibly the ancient Medma, a colony of Locri; there are groups of figures, — of which Dionysus is usually a member, — heads of Dionysus, Silenus masks, young men on horseback, etc.

VARIOUS MINOR DISCOVERIES. — Several minor discoveries are reported in *Not. Scavi*. Remains of a Roman house — architectural fragments and a mosaic floor — have been found at **Canzano** (1901, pp. 497-498). A marble figure of the god of the Nile, surrounded by seven boys, a crocodile, and a hippopotamus, has been found at **St. Maria Capua Vetere** (1901, p. 560). Recent discoveries in the neighborhood of **Castel di Sangro** include walls of various periods, tombs, and a variety of small objects (1901, pp. 462-465). A votive inscription to Juno has been found at **Civita Lavinia** (1901, pp. 512-513). At **Frontone** a bronze statuette has been found, wearing a *torques*; it is probably the figure of a Gallic divinity (1901, pp. 416-417; fig.). At **Genazzano**, remains of a Roman building have been excavated; many votive terra-cottas, lamps, etc., were found (1901, pp. 513-514). Near **Palombara Sabina** two tombs of the Villanova period have been found, each containing an ossuary and other smaller vases; in one was a bronze knife (1902, pp. 20-25; 6 figs.). Remains of Roman baths have been discovered at **Todi**. Among the small objects found was a bronze weight in the form of a pig (1902, pp. 13-14; fig.).

SPAIN

BANEZA.—**Hylas and the Nymphs.**—In *B. M. Soc. Ant. Fr.* 1900, pp. 280-284 (1 fig.), A. HÉRON DE VILLEFOSSE publishes and describes, from a letter of DARIO DA MATA RODRIGUEZ, a mosaic found at Baneza (Léon). Hylas, in the act of dipping water from a spring, is caught by two nymphs. Other representations of the subject are mentioned. The date suggested is the time of Marcus Aurelius.

CADIZ.—**An Archaic Bronze Bird.**—In the *Boletín de la Sociedad Española de Excursiones*, X, 1902 (pl.) a curious bronze found in an excavation at San Fernando (Cadiz) is published. It represents a bird, but from the creature's breast a flat vessel projects. On the top of the bird's head is a ring. The work is rude, but the side of the vessel is adorned with a graceful pattern of curved lines.

DURANGO.—**An Iberian Monument.**—At a place called Miqueldi, in the city of Durango, is a rudely carved animal resembling a swine, between whose legs is a large disk. On the disk are traces of letters not belonging to the Latin alphabet. Many similar rudely carved beasts (called *beceros*) are found in Spain. They are relics of Iberian art, and were intended as sepulchral monuments. The Latin inscriptions cut on some of them are later than the monuments themselves. (P. PARIS, *Revue des Études Anciennes*, IV, 1902, pp. 55-61; pl.)

HUELVA.—**An Important Shrine.**—The shrine of the ancient Iberian goddess of the Lower World, described by Avienus in his version of the Greek *Periplus*, has been discovered not far from Huelva, in southwestern Spain. The temple, with two deep cavities beneath, which still remain, became a shrine of Proserpine, and in Christian times a convent was built about it. It is now S. Maria la Rabida (anciently Erebis), famous as the refuge of Columbus in 1485. The lake of Erebis, now Lago di Inferno or Invierno, is twenty kilometres eastward. The excavations which are planned must yield important results for the history of pre-Carthaginian and pre-Roman Spain. (*Arch. Anz.* 1902, p. 43.)

SANTIPONCE (SEVILLE).—**A Mosaic.**—In the *Boletín de la Sociedad Española de Excursiones*, X, 1902, pp. 19-22 (pl.), PELAYO QUINTERO publishes a mosaic recently discovered at Santiponce, near Seville. The mosaic was in a triclinium. The most important part measures 3.98 m. by 2.67 m. It is divided into octagonal medallions, which are separated by a pattern representing twisted ropes. The spaces between the medallions are filled with lozenges. In the medallions are centaurs, satyrs, and riders. No medallion contains more than two figures. The work appears to be good.

FRANCE

SOME RECENT DISCOVERIES IN FRANCE.—The Minerva of Poitiers, discovered last January, is an archaistic work of the Roman period and a mixture of types rather than a pure copy of an original, but it is, nevertheless, a most interesting statue. It is somewhat under life-size and complete but for the right forearm and the attribute held in the left hand. A singular statue of a warrior from Grézan shows an unknown Greco-Celtic or Greco-Ligurian art. A magnificent bronze statue found in fragments in 1897 has just been set up in the Lyons Museum. The

bronze medal of Pergamon, showing the shape of the Great Altar, was found at l'Escale, Basse-Alpes. Two silver plates from Valdonne, Bouches du Rhône, have monograms resembling others found at Cherchel (Algeria), and at Perm (Russia). (E. MICHON, *Arch. Anz.* 1902, pp. 65-66; cut.)

ANTIBES. — A Military Monument. — In *B. M. Soc. Ant. Fr.* 1901, pp. 172-178 (pl.; fig.) A. DE ROCHEMONTEIX publishes a number of blocks of stone with reliefs, found at a place called Pagau, between Antibes and Cagnes, first mentioned in the April number of the *Revue du Touring-Club*. The reliefs represent breastplates, symbolic animals, javelins, helmets, etc. The place may be the scene of the battle between the forces of Otho and Vitellius, in 69 A.D., mentioned by Tacitus, *Hist.* II, 14, 15. The name Pagau may be a survival of the Latin *Pagus*.

COMBARELLES (DORDOGNE). — Prehistoric Reliefs. — In *C. R. Acad. Insc.* 1902, pp. 51-56 (2 figs.), Dr. CAPITAN and the Abbé BREUIL describe prehistoric reliefs in the cave of Combarelles, near Eyzies (Dordogne). One hundred and nine animals are represented. These are horses, mules, goats, reindeer, and mammoths. Some of the horses have harnesses. The animals are evidently drawn from life. These reliefs must therefore date from a time at least as far back as the tenth millennium B.C.

MEAUX. — A Bronze of the School of Polyclitus. — In the *Revue des Études Anciennes*, IV, 1902, pp. 142-144 (pl. iii.), G. GASSIES publishes a bronze statuette of a nude standing Hermes, found long ago at Meaux, and now in the possession of Mr. Joseph Dassy. The attitude, forms, and style are Polyclitan.

POITIERS. — Statue of Athena. — In *C. R. Acad. Insc.* 1902, pp. 30-31, is a letter from J. A. HILD, describing a marble statue of Athena, found at Poitiers. The right arm is wanting, as is also the left hand, but the shield once held by the left hand exists. There are traces of bronze ornaments. The type is archaic, but the workmanship (which is fine) shows that the statue itself is not of early date. The head was made of a separate piece, and whether it is the work of the same hand as the rest of the statue is not certain.

SENS. — A Replica of the Diadumenus of Polyclitus. — In *B. M. Soc. Ant. Fr.* 1900, pp. 254-258 (2 pls.), A. HÉRON DE VILLEFOSSE publishes a marble head found about 1863 or 1865 at Vauluisant, near Ville-neuve-Archevêque (Yonne), and now in the possession of Dr. R. Lorne, at Sens. The top of the head was made of a separate piece and is missing. The nose is broken, and there are a few slight surface injuries. Otherwise the head is well preserved. It belongs to the series of replicas of the Diadumenus in which Attic characteristics are evident. It has not the "documentary value" of the statue from Vaison. The Diadumenus from Delos is now the best replica known.

TOURNAI. — Inscribed Pottery. — In *B. M. Soc. Ant. Fr.* 1900, pp. 126-131 (pl.), F. DE MONNECOVE publishes and describes some pottery with curious linear and plant ornamentation found within the city of Tournai in 1900. At east and west of the city are two large cemeteries. The first belongs to the first and second centuries after Christ, the second to the third and fourth centuries. In the first the bodies were burned, in the second buried. The pottery found in these cemeteries is of little inter-

est. In an excavation within the city the four vases mentioned above were found. The inscriptions read: *Avete vos; Da vinum; Vitula; Lucrum Fac*. Other vases with similar inscriptions are mentioned.

VERTAULT.—**The Ancient Vertillum.**—In *B. M. Soc. Ant. Fr.* 1901, pp. 215-226 (5 figs.), F. DAGUIN reports the excavations in 1900 at the site of the ancient Vertillum. Part of a wide street and several buildings were uncovered. The town seemed to have been destroyed by fire. Numerous coins were found, the earliest being those of Augustus, the latest those of Tetricus, who died in 274 A.D. Many pieces of pottery, fibulae, and miscellaneous objects came to light. The most remarkable piece of pottery was a vase with griffins and a mounted warrior in relief.

VIENNE.—**A Mosaic.**—In *B. M. Soc. Ant. Fr.* 1900, pp. 258-263, is a note from Mr. BIZOT, director of the Museums of the city of Vienne (Isère) describing a mosaic found at Sainte Colombe. A Bacchic scene is represented, in which the persons are divided into three groups. The central group is ill preserved. The whole is surrounded by a border, representing a vine. The mosaic as yet uncovered seems to be the floor of only a part of a large room.

VILLELAURE.—**Roman Mosaics.**—In *B. M. Soc. Ant. Fr.* 1901, pp. 117-122 (pl.), G. LAFAYE describes, from photographs sent by FRANKI MOULIN, some Roman mosaics found in 1900 at Villelaure (Vaucluse). The most important of these represents the closing scene of the combat of Dares and Entellus (Virgil, *Aeneid*, v, 362 ff.). Entellus has just struck the bull its death blow with his fist. A mosaic with the same representation was found at Aix, in Provence, in 1790, but was destroyed. The second mosaic represents hunting scenes, the third an Egyptian landscape.

GERMANY

THE REICHSLIMESKOMMISSION IN 1901.—The work of the last year has been on matters of detail rather than general questions. New points are the discovery of an earth-fort period for the Odenwald line and a distinct change of route between the earlier—Domitian's—boundary and that of Hadrian's time, in the eastern Wetterau. The only gap existing between the Rhine and the Danube, about 9.5 km. in the Taunus, has been filled by tracing both lines of towers, those of timber and those of stone with palisading. The course of the Odenwald line, from the crest of the ridge to its junction with the Main below Wörth, has been ascertained. In the Rhine section, a peculiarly strong timber structure in the middle of an earth-fort and the central buildings, called *prætoria*, in two other earth-forts, have had especial study. At Pfunz, in the Danube section, a Roman road leading from the east gate of the camp has been found, and also some buildings connected with the iron mining which was carried on here in Roman times. The earthwork at Nasenfels proves to be Roman, not mediaeval. (E. FABRICIUS, *Arch. Anz.* 1902, pp. 66-71.)

THE SOUTH AND WEST GERMAN COLLECTIONS OF ANTIQUITIES.—A large number of objects of Roman or Frankish times and of the prehistoric stone and bronze periods are constantly coming to light, either through accident or by systematic excavation, and the list of annual additions to museums is a long one. In **Strassburg**, besides fragments of Arretine pottery and sculpture, important wall paintings have been found

in digging up the streets. At **Hanau** a broken group of a horseman and giant is of a new type, with a wheel-like shield and the fallen giant turned toward the enemy. At **Wiesbaden** there is new evidence of an early Roman settlement destroyed by fire in the first half of the second century after Christ. At **Dannstadt**, district of Speyer, a burial ground was found that had been used in both the Hallstatt and the La Tène periods. A new phase of neolithic culture appears in some cemeteries in the region of **Worms**, in which the dead were interred in a crouching posture. Digging for public works in **Mainz** shows more clearly the limits of the Roman trading section along the river front. The objects found here are chiefly pottery of the first half of the first century after Christ. Two bell-shaped Arretine bowls, very rare north of the Alps, also come from Mainz. In piping the streets of **Treves**, the street system and other important points of the Roman town came to light and some good single objects were found. The baths here seem to have had no *piscina*. The Provincial Museum at **Bonn** is excavating Roman or prehistoric fortified positions at several points on the Rhine. (J. JACOBS, *Arch. Anz.* 1902, pp. 71-79; 3 cuts.)

BERLIN.—**The Pergamon Museum.**—The Pergamon Museum was opened December 18, 1901. The monuments of Pergamene art (and the monuments from Priene and Magnesia) are now so displayed that the beholder can appreciate the effect produced by them in ancient times. Many fragments hitherto packed away and inaccessible to the public are now exhibited under the most favorable conditions. Never before were remains of ancient art exhibited so nearly in their original setting. The effect upon the knowledge of ancient art cannot fail to be great. (H. WINNEFELD, *Arch. Anz.* 1902, pp. 1-4; plan. Cf. *Berl. Phil. W.* January 18, 1902.)

Meetings of the Berlin Archaeological Society.—At the November (1901) meeting U. von Wilamowitz-Möllendorf presented observations on (1) Borghi's publication on the Roman ship in the Lago di Nemi—an observation barge or float, rather than a ship; (2) Keil's inferences as to the architectural history of the Acropolis at Athens, from a papyrus at Strassburg; (3) some of the Amherst Papyri of Grenfell and Hunt,—especially one of the sixth or seventh century, showing certain modern Greek words in established use. Zahn discussed a group of sculpture, chiefly from Crete, which lies between the Mycenaean and classic Greek periods.

At the December meeting there were shown plans of the excavations and reconstructions of buildings at Miletus, plates from Wiegand's forthcoming work on the primitive architecture of the Acropolis at Athens, and Kekule von Stradonitz's pamphlet on a portrait of Pericles in the Royal Museum at Berlin. Dahm spoke of the excavations at Haltern which have recently proved beyond question that the Roman settlement and fortress of Aliso were here. Various stages of the occupation of the site and two conflagrations are related to definite recorded events. Only a systematic investigation of the remains in this part of Germany is needed to establish the site of the Defeat of Varus and to clear up other mysteries of the Roman invasion of this region. (*Arch. Anz.* 1901, pp. 220-222.)

FRANKFORT.—**A Roman Cemetery.**—A very large Roman cemetery has been discovered near Frankfort. One hundred and fifty graves have already been uncovered. (*Athen.* January 25, 1902.)

FREIBURG. — Meeting of Associated Archaeological Societies. —

The second meeting of the new Verband West- und Süddeutscher Vereine für Römisch-Germanische Altertumsforschung was held at Freiburg, September 23-25, 1901. A list of the subjects discussed is given in *Arch. Anz.* 1901, p. 218.

HALTERN. — The Roman Aliso. — The results of the excavations near Haltern on the Lippe in Westphalia, now recognized as the Roman Aliso, with mountain-stronghold, great camp on the plain, and civilian settlement, are sketched by A. CONZE in *Arch. Anz.* 1902, pp. 4-7; plan.

STRASSBURG. — Archaeological Meeting. — A brief account of the archaeological section of the Philological meeting at Strassburg, October 1-4, 1901, with abstracts of some of the papers, is given in *Arch. Anz.* 1901, pp. 213-218. Among the subjects presented were the Sieglin excavations at Alexandria (Sarapion, water-works, architecture of many successive epochs, and sculpture of unexpected excellence) with a special paper on the great Roman three-story underground tomb-complex; the work of the German Limeskommission (details of the history of the *limes* in relation to that of the Empire); excavations at the Celtic Taradunum near Freiburg; the Mediomatrici (Metz) in relation to Roman civilization; the Austrian Limeskommission; a fable of Aesop on a grave-relief at Florence; the Ara Pacis of Augustus (Petersen); the various Athena temples on the Acropolis (Michaelis); and the Lesche of the Cnidians at Delphi (the paintings of Polygnotus being assigned to the ends of the hall, each occupying an end wall and adjacent portions of the side walls). A representation of the Oresteia of Aeschylus was given, in Wilamowitz-Möllendorf's version.

GREAT BRITAIN

ROMAN BRITAIN IN 1901. — In *Athen.* March 15, 1902, F. HAVERFIELD gives a brief summary of discoveries of Roman remains in Britain in 1901. Little new work was undertaken. [On Caerwent and Silchester see below.] Traces of villas were noted at Rothley (near Leicester), at Worthing (in Sussex), and elsewhere. At Worthing a fragment of a dedication to Constantine was found. Work was continued by the Cardiff Naturalist's Society, and the fort at Gelligaer was completely uncovered. The rampart here was of earth faced with stone. The fort probably belonged to the latter part of the first century after Christ. Work was also continued on Hadrian's wall, and the Scottish Society excavated at Inchtuthill (see above, p. 87).

CAERWENT. — Excavations in 1899 and 1900. — Excavations at Caerwent, Monmouthshire, on the site of the Roman city of Venta Silurum, in 1899 and 1900, are described by A. T. MARTIN and THOMAS ASHBY, JR., in *Archaeologia*, LVII, 2 (1901), pp. 295-310 (1 pl.; 5 figs.). Notes on the animal and other remains found are added by ALFRED E. HUDD, pp. 311-316 (1 fig.). Two houses were completely and one partially excavated. House No. 1 was a small building containing two furnaces. House No. 3 was a large dwelling, with many rooms arranged about a court. Various traces of colored decoration were found.

Excavations in 1891. — The excavations at Caerwent in 1891 were described by T. ASHBY, JR., in a report presented to the Society of Antiquaries, January 16, 1902, a summary of which is in *Athen.* January 25, 1902. Two houses (Nos. 2 and 7) were completely excavated, and found to have

rooms on all four sides of a court, not, as is usual, on three sides only. Excavation of the north gate was begun. See also F. HAVERFIELD, *Athen.* March 15, 1902.

SILCHESTER.—Excavations in 1900.—In *Archaeologia*, LVII, 2 (1901), pp. 229–251 (6 pls.; 9 figs.), G. E. FOX and W. H. ST. JOHN HOPE describe in detail the excavations in *insulae* XXIII, XXIV, XXV, and XXVI, carried on at Silchester in 1900. The houses investigated showed some peculiarities of plan and were rich in mosaic floors. One plate is a plan of *insula* XII, excavated in 1894. The small objects found are described. Notes on the plant-remains of Roman Silchester are added by CLEMENT REID, *ibid.* pp. 252–256.

Excavations in 1901.—In 1901, two *insulae* were examined, one of which contained foundations of three large houses, with hypocausts and mosaics. A tile was found on which was scratched *fecit tubu(m) Clementinus*, showing that the lower classes at Silchester used Latin. (Report by W. H. ST. JOHN HOPE to the Society of Antiquaries May 29, *Athen.* June 7, 1902; cf. F. HAVERFIELD, *Athen.* March 15, 1902.)

DISCOVERIES AND INVESTIGATIONS IN SCOTLAND.—In the *Proceedings of the Soc. Ant.* XVIII, No. 2, pp. 370–386, ROBERT MUNRO reports to the Society on discoveries and investigations in Scotland since May, 1896. He mentions some isolated finds, and describes the Roman camp at Ardoch, the camps and earthworks at Birrenswark, the hill-fort near Abernethy (which is pre-Roman), the Hyndford crannog (pre-Roman and Roman), the hill-fort of Dunbuie—the peculiar objects found in which are regarded by Millar as pre-Celtic, though the fort is post-Roman—and the Dumbuck crannog.

AFRICA

RECENT DISCOVERIES IN NORTH AFRICA.—In *Arch. Anz.* 1902, pp. 52–64 (7 cuts) A. SCHULTEN summarizes the last year's publications on work in Tunis and Algeria by Delattre, Gauckler, Carton, Gsell, several officers of the French army, and others. The Punic objects include triangular stelae which represent the deceased with left hand on the breast and right hand raised and turned palm forward, a painted marble sarcophagus with relief on the cover, from **Carthage**, slabs from monuments of the first or second century after Christ, with animal reliefs and the Punic trinity in the form of conical stones with globes in the place of heads. More of the genuine African rock-pictures have been found in the mountains of the **Algerian Sahara**. Their lifelike animal scenes give an epitome of the native fauna at a time when the country was much less arid than at present. The megalithic monuments in the mountains south of **Constantine** invite comparison with dolmens, cromlechs, nuraghe, pyramids, and all the allied monuments of the Mediterranean and western Europe. At **Leptis Magna**, between the two Syrtes, some monuments similar to the Mausoleum, conical buildings on square bases, have disappeared with the rest of the city since an account of it was published in a French journal in 1694. So it is with all places accessible from the sea,—*etiam periere ruinae*. Specimens of burial in large earthen jars, found in both Tunis and Algeria, are pre-Roman, but whether Punic or not, is uncertain. At **Thugga**, the sanctuary of the Punic Caelestis has been cleared. The area is semicircular and contained statues of the countries and cities where the goddess was worshipped.

A new excavation at **Gigthis**, one of the emporia on the Lesser Syrtis, shows in the superiority of the architecture the Greek influence which here long preceded the Roman occupation of Africa. Study of the Roman *lines Tripolitanus*, a military road along the mountains which protect the coast lands, from the Lesser Syrtis to Leptis Magna, shows that its fortified points, both those on the road and the advanced posts farther south toward the desert, were much smaller than the forts of the German *lines*, being indeed rather block-houses than camps. A quantity of stone and terra-cotta projectiles for *balistae* has been found at **Lambaesis**. Two Roman aqueducts which have been restored to use show the great skill of the Roman engineers. The buried Roman villa at **El Alia**, on the bay of Tunis, is preserved in some parts above the first story and has mosaics, paintings, marble incrustations and baths, although the main apartments have not yet been reached. The name of the owner, Thebanus, is given in a mosaic. Similarly a large private house with three open courts, at **Timgad**, is known to have belonged to one Sertius. Among other mosaics, one at **Carthage** has four horses with bodies radiating from a single head which belongs to them all. Another, at **Thugga**, shows a racing chariot and the inscription, *Eros, omnia per te*, addressed to the guiding horse. Enough of the Odeum at **Carthage** can be uncovered to permit a restoration of the architectural plan and details. Architectural remains of the basilica at **Morsott**, with figures symbolic of the church, recall the Semitic worship of deities in the form of stones and pillars, and the inscription from Thala, *Saturno baetulum . . . cum columna d. s. fecit*. Among the finds of sculpture, largely from **Cherchel**, are a copy of a fifth century Argive statue of a youth, which resembles the "Orestes" with "Electra" at Naples; a head of Aesculapius similar to the Zeus of Otricoli, a new portrait head of Juba II, and one of Livia, and a new head belonging to the series of fifth century Athenian generals. Smaller fine work is represented by a bronze oenochoe, which has a handle formed of the figures of two boys, and two terra-cotta lamps of Alexandrian style, one in the form of a Nile boat.

BOU-GHARA (GIGHTI).—**Inscriptions.**—Two Latin inscriptions from the forum of the ancient Gighti are published by R. CAGNAT, *C. R. Acad. Insc.* 1902, pp. 37-40. One, a dedication to Antoninus Pius, shows that he gave Gighti the rank of *municipium*; the second is in honor of Servilius Draco, who had twice gone to Rome at his own expense to gain the *Latium mains* for the town, and had finally been successful. After this time (apparently the second half of the second century after Christ) the decurions of Gighti were, then, Roman citizens.

CARTHAGE.—**A Marble Sarcophagus.**—In *C. R. Acad. Insc.* 1902, pp. 56-64 (2 figs.), Father DELATTRE describes a marble sarcophagus, found with a number of objects in one of a series of chamber tombs at Carthage. On the cover of the sarcophagus is a high relief of excellent workmanship, representing a fully draped woman. Her outer garment is drawn up over the back part of her head, and is held away from her face by her right hand. The thick, waving hair above the forehead is uncovered. The face seems to have been intentionally injured. The work belongs apparently to the third century B.C.

Sculptures.—The excavations in Carthage, according to a letter from Tunis in the *Berlin Post*, have recently brought to light a number of statues.

One represents Hadrian in military costume. A colossal statue of a sitting Jupiter, a colossal statue of an empress, and several heads of empresses, including one of Faustina, also occur amongst the late discoveries. (*Athen.* January 18, 1902.)

Baal-Samaïm.—In *C. R. Acad. Insc.* 1901, pp. 487–489, P. BERGER publishes a Punic inscription sent by Father Delatre from Carthage. It mentions Baal the Celestial (Baal-Samaïm, or Belsamin), whose worship at Carthage was not attested heretofore. It also shows that the office of chief priest was hereditary. The office of *sano* mentioned is as yet unexplained.

A Potter's Kiln.—During his excavations beneath a Roman villa P. Gauckler came upon a Punic potter's kiln, which is in so unimpaired a condition that seemed to bring into view the entire apparatus and process of the potter's work. Gauckler promises full information shortly, but says he is now convinced that a whole series of the potter's ware, hitherto supposed to have been imported, was produced in Carthage itself. (*Athen.* May 31, 1902.)

LAMBAESIS.—**The Praetorium.**—In *C. R. Acad. Insc.* 1902, pp. 40–46 (plan; 4 figs.), R. CAGNAT reports on the progress of discoveries at Lambaesis (see above, p. 90), and publishes a restored plan of the *praetorium*, a large court surrounded by porticos and chambers. A large number of egg-shaped clay projectiles and a pedestal with a dedication to Septimius Severus and his sons were found.

UNITED STATES

BOSTON.—**Acquisitions of the Museum of Fine Arts.**—The following summary is taken from the report of Edward Robinson to the Trustees of the Boston Museum of Fine Arts, published in the Annual Report of the Trustees for 1901 (Boston, Alfred Mudge & Son).

The total number of objects added to the collections of original antiquities in the Department of Classical Art during the year 1901 was 1173. These may be classified as follows:

Terra-cottas, including fragments	383
Vases	128
Fragments of vases	40
Marble and stone	28
Bronzes	68
Gems	77
Jewellery and ornaments	49
Glass	27
Ivory and bone	13
Coins	235
Lead and bronze weights	80
Fayum textiles	37
Miscellaneous	8
	<hr/> 1173

TERRA-COTTAS.—Regarded as a whole, these constitute the most important acquisition of the year. The 383 added this year have been the gradual accumulation of a friend of the Museum. Many of them were for-

merly in well-known private collections, and a considerable number have been published. They may be classified as follows:

Statuettes	251
Heads and masks	56
Fragments of statuettes not included in above	43
Moulds for parts of statuettes	13
Reliefs (counting as one number twelve small gilded figures in relief, used as decorations of a chest or casket, <i>Forman Sale II</i> , 191)	16
Lamps decorated with reliefs	4
	<hr/> 383

The types represented in these are numerous and varied. One hundred statuettes are of Tanagra types, eighty-one statuettes, masks, etc., of Myrina types, sixty-six of Smyrna types, and various places in Greece and Lower Italy are well represented.

Included in this section, because of its material, though it represents a much nobler art than the statuettes and reliefs, is a life-sized portrait bust of a Roman, of the first century B.C., perfectly preserved in every respect except color. The subject, as yet unidentified, is an elderly man, close-shaven, with a face which indicates a character combining force, intelligence, and refinement. The type is clearly that of an aristocrat and a leader of men, whether as soldier or statesman.

VASES. — Of the 128 vases acquired during the year, the most important, or at all events the best known, are 25 from the Bourguignon collection in Naples, most of which have been published. These are nearly all Attic black-figured and red-figured vases; but the acquisitions of vases during the year extend from pre-Mycenaean vases found in Egypt to Arretine ware. Many of the vases acquired are exceptionally fine.

MARBLE AND STONE. — First in importance among the twenty-eight fragments included under this head is a nude male torso, of heroic size, which has sufficient resemblance to the Doryphorus to mark it as unquestionably a Polyclitan work. The missing parts are the head, the right arm from just below the shoulder, the left arm from the elbow, the right leg from the upper half of the thigh, and the left leg from and including the knee. It is probably a Roman copy, of rather better than the average quality of Roman copies.

Next is the fragmentary figure of a young woman, of life size and beautifully draped, which is undoubtedly a Greek work. She stands on the right leg, the left leg slightly bent, her left hand lightly clasping the folds of her himation, just below her breast, and her right hand, enveloped in the himation, hanging at her side. Missing are the head, the left foot and ankle, the right foot and lower part of the leg.

Besides these large works there are two small torsos of Marsyas; part of a statuette (of *palombino*) of Aphrodite untying her sandal; a splendid Scopae head of a youth, of Greek workmanship, displaying admirably the characteristics of the style of Scopas; two other fourth century heads — one of an elderly woman, from an Attic grave monument (type like Athens, National Museum No. 966), the other a Hygieia or Apollo (cf. Brunn-Bruckmann, *Denkmäler*, No. 525); portrait heads of Ptolemy IV and Arsinoë III;

a charming head of Aphrodite, of Roman workmanship; a large head of a ram; a double herma of Heracles and Hebe (?); four Roman portrait heads, including one of an infant; and eight fragments of reliefs, etc.

BRONZES. — With one exception these are all small. The exception is the fragment of a draped male statue, of life size, and apparently standing in an attitude like that of the Aeschines in Naples. The fragment includes only a part of the drapery of the right half of the figure, from the neck to just above the ankle, with the right arm, enveloped in the folds, but not the hand. It is Greek, and probably of the fourth century.

Twenty of the small pieces are statuettes. These include two draped Aphrodites of the severe style, as mirror-stands, two discoboli in different attitudes, two ἐγκρινόμενοι (youths taking oaths), the fine archaic figure of a youth striding a horse (horse missing), from the first Forman sale, figures of Asclepius, Heracles, Triton, and Atys; an archaic female dancer, a running satyr, a young warrior, a girl with a dove, an archaic man, squatting (from the north of Greece), a youth putting a weight, and three other youths.

Among the other bronzes are five Greek (box) mirrors, two Etruscan mirrors, two archaic griffins' heads (from the Forman collection), three small and very fine archaic (repoussé) reliefs, two of them representing the Battle of the Gods and Giants, the third not yet cleaned sufficiently to disclose the subject; four figures of animals, a fragment of a Corinthian helmet, bearing the incised inscription Το Διος Ολυμπιο; an exceptionally beautiful and perfect strigil, with chased decorations and the maker's stamp, — ΑΠΟΛΛΟ..; a caduceus, the head of bronze and the handle of iron (length, 0.39 m.); and miscellaneous fragments, handles, ornaments, etc.

GEMS. — The seventy-seven gems include sixty-nine intaglios, six cameos, one uncut crystal scaraboid, and one crystal ring, which has a large concave bezel. There are several fine Mycenaean gems among them; and as a whole they cover a wide range chronologically, as well as in the variety of types and subjects represented.

JEWELLERY AND ORNAMENTS. — The most important of the forty-nine individual objects in this section are three thin gold disks, measuring respectively 0.167 m., 0.075 m., and 0.075 m. in diameter, from a tomb at Neandreaia, in the Troad. The holes around the edges of each show that they were sewn upon draperies of some kind, and the surface of each is covered with elaborate repoussé decorations in low relief. They are probably late Mycenaean or early Ionic. There are also eleven small Mycenaean gold ornaments, eight of which are of basket shape (cf. the mould in Schliemann's *Mycenae*, Fig. 162), and a Mycenaean gold pin; and among the later objects are four pairs of earrings, five single earrings, or parts of earrings, four Greek necklaces (two of them of children's size); eight rings with intaglio designs in the bezels (two of gold, three of silver, three of bronze), one pair of gold studs or buttons with filigree decorations, two gold pins with ball-heads, and five links of a chain necklace of wrought gold.

GLASS. — Twenty-seven numbers; among them a Phoenician head of archaic type, composed of opaque glass of various colors; a number of Phoenician glass vases, two specimens of Romano-Egyptian glass mosaic (sections cut from rods), a fragment of a cameo glass vase, white on blue, six excellent specimens of late blown glass, from Phoenicia; and a pane of window

glass, of the Roman period, measuring 35 × 27 cm., said to be from Puteoli (Bourguignon collection).

IVORY AND BONE. — The items under this heading are two small heads, — one of a man, the eyes inserted, the other a charming head of a child, with the hair gilded, — and eleven dice of various sizes. Two of these are quite small, and enclosed in an ivory box, with a compartment for each.

The weights will have to be submitted to the investigation of a specialist in Greek metrology before an intelligent or satisfactory account of them can be given. They are all in good condition, and with one or two exceptions they bear either inscriptions or devices or both; they range in weight from 21.16 to 18,180 grains, and most of them are stated, on good authority, to be of Attic *provenance*.

The thirty-seven specimens of colored weaving and embroidery from the Fayum have been handed over to the Textile Department to increase its collection of Fayum textiles.

MISCELLANEOUS ORIGINALS. — These are: (1) A small silver statuette of a draped goddess (124 mm. high), cast hollow, and of an extremely thin shell. (2) A large silver spiral, to be worn as an ornament on the leg. (From the second Forman sale, No. 340.) (3) Fragment of a Pompeian fresco, 24½ × 25 cm., containing a female head, of good style, veiled and diademed. From the Bourguignon collection. (4) Head of a child, life size, of plaster, Roman. (5) Fragment of a small relief, in plaster, representing a youth and betaera on a couch. From Egypt. The style and subject are suggestive of the designs of Tigranes on Arretine pottery, and the relief may, perhaps, form a bit of evidence in tracing the origin of such designs on that ware. (6-8) Three curious, small objects of rock crystal. Two are possibly studs, being shaped like large modern shirt studs, with flat front and slightly concave back; the third might be an eyelet, being a ring with thin, concave sides. It has been suggested also that these are stands for very small vases. They are carefully finished, and without decoration of any kind.

REPRODUCTIONS. — A full-sized copy, in bronze, of the statue of a Charioteer found at Delphi in 1896, during the excavations of the French School.

A collection of seventy of the excellent electrotype reproductions of Mycenaean metal objects made by the Galvanoplastische Kunstanstalt of Geislingen-Stein, in Württemberg.

A bronze copy of the large statuette of Aphrodite in the Lateran. Helbig's *Guide* (English), No. 699; *Monumenti dell' Istituto*, IX, pl. viii.

A bronze copy, beautifully executed, of the Alexandrian statuette of a Negro Boy in the Bibliothèque Nationale, Paris. Babelon and Blanchet's *Catalogue*, No. 1009; Rayet's *Monuments*, II, No. 58.

Seventy-nine photographs of objects in the Imperial Museum of Constantinople sent in exchange by his Excellency Hamdy Bey.

COINS. — The collection of coins bought in recent years with the bequest of Mrs. Catharine Page Perkins and known as "the Catharine Page Perkins Collection of Coins," contains 609 coins, of which 576 are Greek and 33 Roman. This is a small collection in itself, but of very exceptional value from the point of view of numismatics as a fine art, on account of the beauty or artistic interest of each of the types represented, and of the remarkable

preservation of all the examples. Some of them are of extreme rarity. The Greek coins are from all parts of the Greek world, and of various dates. A descriptive list of all the coins is given in the report.

PHILADELPHIA. — **Tablets from Nippur.** — The Sultan has presented to Professor H. V. Hilprecht, in addition to numerous other antiquities, the larger part of the temple library of Nippur, consisting of clay tablets, none of which is later than 2000 B.C. Professor Hilprecht has presented the tablets to the University of Pennsylvania, and will proceed to decipher and publish them. (*HILPRECHT, S.S. Times*, May 17, 1902.)

BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART GENERAL AND MISCELLANEOUS

CHRISTIAN ANTIQUITIES IN THE SUDAN. — Mr. JOHN WARD, F.S.A., writes: "We have all heard of the temples and pyramids at Meroë, but few were prepared for the discovery of ruined Christian cities beyond Khartum. In the beautiful garden of the palace at Khartum, I saw a huge stone Paschal lamb, of evident Roman structure. Father Ohrwalder told me that this was brought from the ruins of Soba, on the Blue Nile, twenty-five miles beyond Khartum, in Gordon's time, and that he knew the place, which abounded with the remains of Christian temples, and was once the centre of a civilized kingdom. Colonel Stanton, Governor of Khartum, found me a map of the country round Soba, with the ruins laid down. Since then he has visited the ruined temples himself, and is preparing to have them cleared from the sand, and photographed. About eighty miles north of this there are the extensive ruins of another city — Naga — with fine temples of Roman architecture, avenues of lambs, the same as the one at Khartum, leading up to them. The inscriptions are in hieroglyphs, while the composite capitals of the columns bear the cross, both at Soba and Naga. The lamb at Khartum has a long hieroglyph text and the cartouche of some ancient king. This inscription had not been observed before I discovered it on the base under the gravel. So far south, Roman work of Christian times with hieroglyphic texts is a novel combination and demands further research. Since I left Khartum, Colonel Stanton writes me that he learns from the natives that there are many similar ruins spread all over the country, and, eighty miles east of Khartum, sculptured rocks and inscriptions, while as far away as Darfur, tidings of ruins of temples reach him." (*London Times*, May, 1902.)

MAKRONISI. — **A Byzantine Cistern.** — In *Jh. Oesterr. Arch.* I. V, 1902, Beiblatt, coll. 35-38 (3 figs.), V. v. HOLBACH describes a vaulted Byzantine cistern on the island of Makronisi in the Gulf of Smyrna. The date is not earlier than the fourth century after Christ, and may be as late as the sixth.

STOCKHOLM. — **A Painting by Frans Hals.** — The Museum of Stockholm has recently acquired a painting by Frans Hals representing a violin player. (*Chron. d. Arts*, 1901, p. 322.)

NEW YORK. — **The Metropolitan Museum of Art.** — The celebrated collection of vases belonging to Mr. James H. Garland, has been purchased by Mr. J. Pierpont Morgan for about \$600,000, and will remain for the present on exhibition in the Metropolitan Museum of Art.

ITALY

AFFORI.—The 'Madonna of the Grotto.'—There has been discovered at Affori, near Milan, another painting of the 'Madonna of the Grotto,' pronounced by Diego Sant' Ambrogio to be superior to the Louvre and London examples. This painting he assigns to Leonardo da Vinci, between 1520 and 1540. The new painting has engaged the attention of DIEGO SANT' AMBROGIO in the *Rassegna d' Arte*, 1901, Nos. 6, 7, in *Lega Lombarda*, 1901, July 23 and August 18, in *Arte e Storia*, 1901, Nos. 18-19. It has been seen and admired by G. Schlosser of Vienna, Marcel Raymond of Grenoble, and Semper of Innsbruck. Frizzoni, however, has also visited Affori and attributes the painting to one of the pupils of Leonardo.

A Madonna by Bernardino Luini.—A little known but charming Madonna by Bernardino Luini is published by AMBROGIO ANNONI in *Rassegna d' Arte*, 1901, pp. 156-157. The painting belongs to Cav. Uff. Nobile Giovanni Litta-Modignani, and is in his villa at Affori, not far from Milan. In this painting, Luini was evidently strongly influenced by Leonardo's famous 'Madonna of the Grotto.'

CASTELNUOVO DI PORTO.—A Painting by Perugino.—In the Church of Santa Maria Assunta at Castelnovo di Porto, there is an altarpiece in the form of a triptych, the central panel of which represents the Redeemer. The subsidiary panels portray four saints. A document has recently come to light proving that this painting was ordered of Perugino. The central panel, which bears the date, 1501, is by the master, while the other panels are evidently the work of one of his scholars. (ALESSANDRO BELLUCCI, *L' Arte*, 1902, pp. 39-43.)

CASTIGLIONE D' OLONA.—Various Monuments.—Castiglione d' Olona in Lombardy has become well known from the recently discovered frescoes by Masolino. Other noteworthy monuments in the town are figured by A. CODARA in his *Guida di Varese*, published in 1901. An illustrated article on the town is published by LUCA BELTRAMI, *Rassegna d' Arte*, 1901, pp. 181-183.

CODIGORO.—Paintings by Dosso Dossi and Garofalo.—Two paintings, one by Dosso Dossi, and another by Garofalo, which have apparently escaped the attention of scholars, are in the Cathedral of Codigoro in the Emilia. The painting by Dosso Dossi represents the Virgin in Glory with St. John the Baptist and St. John the Evangelist in the foreground. The painting by Garofalo represents the Madonna enthroned with San Martino and Santa Lucia. (*L' Arte*, 1901, pp. 355-356.)

FAENZA.—A Lunette by G. B. Bertucci.—The paintings by G. B. Bertucci have been identified only in recent years. There are two of them in the National Gallery at London, long assigned to the School of Perugia, and one in the Museum at Berlin, formerly attributed to Pinturicchio. The Gallery at Faenza contains other paintings by this artist. A fine lunette representing the Coronation is now offered for sale in Faenza, and FEDERICO ARGNANI makes an appeal in *Rassegna d' Arte*, 1901, p. 173, that this should be acquired for the Gallery of Faenza.

FERRARA.—The New Gallery.—A new gallery has been established at Ferrara. The gifts of il Duca Massari and of Sig. Riccardo Lombardi, as well as the purchase of part of the collection of Sig. Alessandro Morelli,

have enriched the gallery of Ferrara by more than two hundred paintings. Many of the best old Italian masters are here represented. There is also a room devoted to modern paintings and one to tapestries. (*Arte e Storia*, 1901, pp. 120-121.)

FLORENCE.—**The House of Dante.**—The Association for the Preservation of Old Florence has taken active measures to procure for the city of Florence the house of Dante. (*Arte e Storia*, 1902, p. 35.)

The Mosaic in the Church of S. Marco.—In the Church of S. Marco, Florence, there is a mosaic representing the Madonna. This is of eighth century workmanship, and came from St. Peter's, Rome, from a chapel, the position of which is occupied to-day by the Porta Santa. Other portions of this mosaic are found in the Lateran, in the crypt of St. Peter's, and in the sacristy of S. Maria in Cosmedin. The inscription above the mosaic in Florence, though correctly referring it to the time of Pope John VII, bears the date 1203. Besides this erroneous date, the inscription contains the title *Pontifex Maximus*, whereas this Pope would not have used this title, but merely that of *Episcopus*. (*Arte e Storia*, 1901, pp. 66-67.)

The Brancacci Chapel of the Carmine.—The Brancacci Chapel, which contains the famous frescoes of Masolino, Masaccio, and Filippo Lippi, is now receiving the attention of the Ufficio Regionale. An effort will be made to remedy the dampness of the building, also to open up an ancient window and thus introduce more light into the chapel. (*Arte e Storia*, 1902, p. 7.)

Paintings in Santa Maria Maggiore.—In the restorations which have taken place in the principal chapel of the Church of Santa Maria Maggiore, at Florence, there have come to light some fragments of ancient wall paintings which, according to the historians, were executed by Spinello Aretino. One of these represents King Herod in the Massacre of the Innocents. They exhibit skill in chiaroscuro, are well designed, and correspond in style to the works of Spinello. (*Arte e Storia*, 1901, p. 142.)

LODI.—**The Exposition of Sacred Art.**—In September, 1901, an exposition of sacred art was opened at Lodi. Perhaps the most important object here exhibited is the celebrated silver cross, from the Church of the Incoronata at Lodi, made by Bartolomeo and the brothers Brocchi of Milan, in the year 1512. A number of paintings, works of sculpture, and miniatures were also placed on exhibit. (*L'Arte*, 1901, pp. 353-354.)

MILAN.—**The Gallery of the Sforza Castle.**—A small but interesting collection of paintings, formerly in the Municipal Museum and recently inaccessible, have now been placed in the Sforza Castle, where they are well exhibited. The collection contains noteworthy examples of Lombard, Venetian, and Flemish paintings. They are described by EMIL JACOBSEN in *L'Arte*, 1901, pp. 297-309. Amongst them is the martyrdom of Saint Sebastian, attributed by Jacobsen to Vincenzo Foppa, a portrait by Antonello da Messina, a portrait of a young man by Lorenzo Lotto and a Madonna by Correggio.

An Illuminated Document.—In *Arte e Storia*, 1902, pp. 32-33, 43-44, DIEGO SANT'AMBROGIO describes an illuminated document of the year 1479. It contains an authorization to the Confratelli della Concezione to elect a confessor for the absolution of all offences not especially reserved by the papal see. The document is illuminated by the miniature painter, Cristo-

foro de Predis, and may be compared with other works by the same miniature painter in Milan, Turin, London, and elsewhere. It is of exceptional interest because the painting of the 'Madonna of the Grotto' was executed for the same fraternity by Leonardo da Vinci, assisted by Ambrogio de Predis.

A Large Painting by Cima da Conegliano.—A large painting, representing the Madonna and Saints, which is signed and dated, and which has for a long time been preserved in a little church at Casiglio near Erba, has been removed to the Brera at Milan, where it will soon be exposed to view. (*Rassegna d' Arte*, 1901, p. 108.)

MONTEFIORENTINO.—**The Cappella Oliva.**—The Cappella Oliva at Montefiorentino contains several important works of art, among which is a 'Madonna and Saints' by Giovanni Santi, and a sepulchral monument to Count Gianfrancesco Oliva, by Francesco di Simone Fiorentino. These are published by ONOFRIO FATTORI in *Rassegna d' Arte*, 1902, pp. 6-8.

PISA.—**The Church of S. Francesco.**—The Church of S. Francesco at Pisa, which was long used as a military storehouse, has now been reopened for religious purposes. The church has been largely restored, and the high altar has been reconstituted according to the designs of Tommaso Pisano. The choir seats have also been restored, and the paintings above the altars cleaned. (*Arte e Storia*, 1901, p. 143.)

RIPATRANSONE.—**Frescoes by Ascanio Condivi.**—In the *Rassegna Bibl. Arte Ital.* 1901, pp. 1-13, C. GRIGIONI brings to light some frescoes by Ascanio Condivi, the follower and biographer of Michelangelo. These frescoes are found in the little church of S. Maria del Carmine in the territory of Ripatransone. One of them, the most important, represents a Deposition; a second, the Adoration of the Magi; a third, S. Antonio Abate; and a fourth, a Madonna. The influence of Michelangelo is evident in these frescoes. They are of importance in showing that Condivi was not only an architect and a sculptor, but also a painter.

ROME.—**Early Christian Monuments.**—It is proposed to publish hereafter more regular and detailed accounts of excavations in the Roman catacombs. As the first in this series of articles, O. MARUCCHI in *Not. Scavi*, 1901, pp. 484-495 (2 figs.), describes the most recent work in three of the ancient cemeteries. In the catacombs of St. Priscilla, on the Via Salaria Nuova, an ancient baptistry was cleared, connected with the Basilica of St. Silvester; in the neighboring galleries inscriptions were found, one of which shows that they were in use as early as the beginning of the third century. In the catacombs of Nicomedes on the Via Nomentana, a long gallery has been excavated; the crypt of Nicomedes was probably a small chapel at the foot of the stairs, where numerous fragments of marble decoration have been found. There has been recent excavation also under the church of St. Agnes on the Via Nomentana. There were found many inscriptions, a sarcophagus with a representation of Cupid and Psyche, and an interesting marble fragment with pictures of Peter and Paul. A long gallery was excavated, containing an inscription of the year 349; this gallery is obstructed by foundations of the present church, which is therefore of later date. Under the altar, the sepulchral urn of St. Agnes was found.

Sale of the Sangiorgi Collection.—Among the objects of the Sangiorgi collection sold in Rome, April, 1902, was an early Botticelli represent-

ing the Madonna and Child. A close relationship in the early works of this master to those of Filippo Lippi is well illustrated by comparison of this Madonna with a very similar Madonna by Filippo now in the Gallery at Munich. The general composition, including the landscape background, differs but little in the two paintings. In the same collection was a very fine Conversation by Vincenzo Catena, and two interesting reliefs by Alfonso Lombardi, published in *L'Arte*, 1902, pp. 57-62.

The Frescoes of S. Maria Antiqua.—GERSPACH, who has described the frescoes of the S. Maria Antiqua in the *R. Art Chrét.*, describes them again for the Italian readers in *Arte e Storia*, 1902, Nos. 1-6.

The Villa Borghese.—When the Borghese Museum and Gallery was acquired by the government, it was expected that the collections would have to be removed in two years. It is now, however, practically assured that these collections will remain in the Villa Borghese, with which they have been so long associated. The government will probably sell the gardens to the municipality of Rome. The king is to erect a monument to his father in the Borghese Gardens, and the government will establish on a portion of the land an agricultural college. The gallery contains five or six world-famous canvases, together with many paintings of inferior quality. The Museum contains an important collection of ancient sculpture. (*L'Arte*, 1901, p. 420; *Am. Arch.* 1902, January 4, p. 8.)

The Castle St. Angelo.—The Castle St. Angelo is shortly to be turned into a national museum. The underground passage leading to the Vatican has been found and the accumulated rubbish of ages cleared from it. In the old bastions, which correspond to a ground floor, will be collected all that refers to the mediæval history of Rome. The documents and objects which refer to the castle itself will be arranged in the two *salons* called 'Clement VII,' which open on the great court; while above, in rooms which were once cells for political prisoners, and afterward officers' quarters, will be an Italian military engineering section. It will include an exhibit of models, drawings, and histories of mediæval and later fortifications, in which Italian engineers were masters. To these new interests will be added those already there, such as the cells of Beatrice Cenci, Benvenuto Cellini, and other famous prisoners, the treasure-room containing the great iron-bound chests, the torture-chamber, and the entrance to the passage leading to the Vatican, which visitors will not be allowed to penetrate. (*Am. Arch.* November 9, 1901, p. 48.)

S. SEVERINO.—The Church of S. Rocco.—During the fifteenth century there flourished at S. Severino a colony of Lombard architects, sculptors, and engineers, who left behind them various monuments and established the Church of S. Rocco and the building for the fraternity of S. Rocco. In *Arte e Storia*, 1901, pp. 87-91, VITTORIO EMANUELE ALEANDRI publishes documents of the sixteenth and eighteenth centuries containing the names of these Lombard artists.

VARESE.—Museum at Sacro Monte di Varese.—On the Sacro Monte di Varese there has been recently established a museum, the contents of which are described by LUCA BELTRAMI in *Rassegna d'Arte*, pp. 8-11. On this sacred mountain are found most realistic representations of the Passion of Christ, executed partly in sculpture and partly in painting by Dionigi Bussola from 1645 to 1687. This series of Capelle stazionali,

together with those on the sacred mountains at Varallo and Orta, are certainly the most extraordinary representations of the Passion to be found in Italian art.

VENICE.—**The Scuola di S. Rocco.**—All the art treasures of the Scuola di S. Rocco are carefully studied by G. M. URBANI DE GHELTOF in a volume entitled *Tesoro della Scuola Grande di S. Rocco in Venezia*, published in Venice, 1901. (*Arte e Storia*, 1901, p. 144.)

SPAIN

A Madonna by Quentin Matsys.—In the *Boletín de la Sociedad Española de Excursiones*, 1902, pp. 1-2, E. S. FATIGATI publishes a Madonna by Quentin Matsys, which is in the collection of D. Pablo Bosch at Madrid. On the painting are found the letters "M. A.," which seem to be part of the signature.

FRANCE AND BELGIUM

GHENT.—**Archaeological Inventory.**—An archaeological inventory, made in an interesting way, has been begun for the town of Ghent. A photograph of a monument and its description are printed upon a single sheet. These *fiches archéologiques* may then be classified in any order which may be desired, and thus possess the advantages of the card catalogue system of an American library. (*R. Art Chrét.* 1902, p. 259-260.)

LYONS.—**An Illuminated Manuscript.**—In the Chapter House of the Cathedral at Lyons is a pontifical of the fourteenth century, important not only because it once belonged to the chapel of the popes, but because it contains the signature of the miniaturist who inscribed and illuminated it. It contains the ceremony for the consecration of a pope, for the coronation of an emperor, and for the benediction of an empress. It is signed, *Explicit liber quem scripsit Rainerius de Florentia, scriptor atque notarius.* (*Bull. Hist. Dioc. Lyon*, 1902, pp. 24-28.)

PARIS.—**The Gift of Adolphe De Rothschild to the Louvre.**—The magnificent gift of Baron Adolphe de Rothschild, consisting largely of goldsmiths' work of the fifteenth and sixteenth centuries and representing the art of France, Italy, Flanders, Germany, and Spain, is described in *Gaz. B.-A.* 1902, pp. 265-279, by P. FRANTZ MARCOU.

In *Les Arts*, March, 1902, pp. 8-14, is a finely illustrated article on the subject by GASTON MIGEON. A folio of thirty-seven plates has also been published by E. MOLINER, entitled, *Donation de M. le baron Adolphe de Rothschild.* Paris, 1902.

LOUVAIN.—**The Last Painting of Jan Van Eyck.**—In the *R. Art Chrét.* 1902, pp. 1-6, W. H. JAMES WEALE publishes a fine triptych by Jan Van Eyck. The painting was made for the Grey Friars of Ypres for the Church of St. Martin, and its history may be traced down to the present day. It now belongs to N. G. Helleputte of Louvain. The central panel, which represents an abbot worshipping the Madonna and Child, is authenticated also by drawings now in the Germanic Museum at Nuremberg and in the Albertina at Vienna. The painting was not entirely completed when Jan Van Eyck died, in 1441.

GERMANY

DÜSSELDORF.—**Exhibition of Mediaeval Art.**—In connection with the display of modern German industry and art, an exposition of the

artistic productions of Rhenish Germany in the Middle Ages, principally in the domain of ecclesiastical architecture and sculpture, was opened on the first of May. Practically all the great cathedral seats of northwestern Germany — Aix-la-Chapelle, Cologne, Münster, Paderborn, Hildesheim, Osnabrück — have showered their treasures on this exposition, so that there is here offered an unequalled opportunity for studying from the originals what mediaeval handicraft produced in ivory, wood, intaglio, bronze, silver, and gold work. Large monumental works of German architecture and sculpture are represented here by casts. This exposition is especially interesting in view of the museums of German mediaeval art now being planned for Berlin, Munich, and Cambridge, Mass. (*New York Evening Post*, June 17, 1902.)

LÜBECK. — **Polyptych by Hans Memling.** — Visitors to Lübeck are very apt to overlook an important altarpiece by Memling, in the Cathedral, since it is not generally exposed to view. This altarpiece is not unknown to writers like Weale and Kaemmerer, and has been made the subject of a special monograph published at Lübeck by Noehring, 1901. It forms the subject of an interesting article by GEORGES SERVIÈRES in *Gaz. B.-A.* 1902, pp. 119-132.

STRASSBURG. — **A Painting by Filippo Mazzola.** — In the Museum at Strassburg there is a painting of the Resurrection on the back of which has recently been discovered the signature: 1497, FILIPVS MAZOLVS. This is the third painting by this artist which has recently been brought to light. (VENTURI, *L'Arte*, 1901, p. 417.)

AUSTRIA

VIENNA. — **Three Paintings by Tiepolo.** — During the rebuilding of the house of an old-established firm of art dealers in Vienna a great roll of canvas was discovered among a heap of rubbish, which, on closer inspection, turned out to be three pictures by Giovanni Battista Tiepolo, who is known to have had personal relations with the grandfather of the present head of the firm. The pictures, which must have lain hidden for well-nigh thirty years, represent 'Hera banishing Selene,' 'The Triumph of Amphitrite,' and 'Bacchus and Ariadne' (air, water, and earth), and are said to be excellent specimens of the painter's art. The coloring, for which he was famous, is well preserved. (*Athen.* June 7, 1902.)

ENGLAND

ROMSEY ABBEY. — **Remains of Saxon Work.** — In *Archaeologia*, LVII, 2 (1901), pp. 317-320 (3 pls.), C. R. PEERS describes foundations discovered in Romsey Abbey Church in 1900. The round Saxon apse was traced. Other suggestions concerning the Saxon building are conjectural. Walls of different dates, about 1090, 1120-1160, about 1160, and foundations of walls of the thirteenth and fourteenth centuries are described.

THE STAGE ENTRANCES OF THE SMALL THEATRE AT POMPEII

IN the wall at the rear of the stage of the Small Theatre at Pompeii there were five doors. Only the openings remain; all traces of the door frames, as well as of the stucco which once covered the wall, have disappeared.

Three of the doors correspond with the stage entrances usual in Roman times. That marked *a* in Fig. 1, distinguished from the rest by its size (width of the opening 2.36 m., approximately 8 Roman feet), according to the description of the stage by Vitruvius (V, 7, 8), would be "the double door in the middle with ornamentation like that of a palace." The doors next to it on either side were somewhat narrower (width of the openings 1.75 m., approximately 6 Roman feet); they are the *hospitalia* of Vitruvius, the entrances designated as "right" and "left" in the description of Pollux.¹ The two remaining entrances, one near each end (*d*, *d'*, width of the openings, 3 feet 1 inch Roman measurement), are so small that they must have been closed by a single door.

At the west end of the stage is a broad doorway (*C'*), opening into the colonnade which led to the left parodos of the Large Theatre. It is shown in a plate by Mazois,² which is reproduced in fig. 98 of the Overbeck-Mau *Pompeji*; the opening has the same width (2.36 m.) as that of the middle door *a*. There is a similar doorway (*C*) at the opposite end, opening into a colonnade which was extended along the side of the building on Stabian Street. Large double doors were

¹ *Onomast.* IV, 124.

² *Les ruines de Pompéi*, vol. IV, pl. 27.

likewise placed in the ends of the long and narrow dressing room, *postscaenium*, behind the stage. One (*D*) opened into the colonnade on Stabian Street, the other (*D'*) into the por-

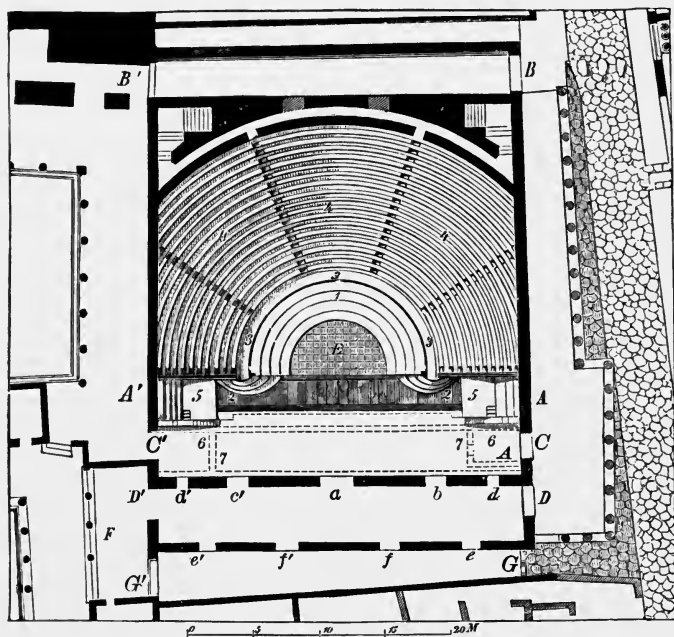


FIGURE 1. — PLAN OF THE SMALL THEATRE AT POMPEII.

(After Mazois, *Les ruines de Pompéi*, vol. IV, pl. 28, and Overbeck-Mau, *Pompeji*, fig. 97.)

$\alpha, b, c.$	The ordinary stage entrances.	<i>C, C'.</i>	Large entrances at the ends of the stage.
$d, d'.$	Small entrances to the stage.	<i>D, D'.</i>	Large entrances at the ends of the postscaenium.
$e, e', f, f'.$	Rear entrances of the postscaenium.	<i>E.</i>	Orchestra.
<i>A, A'.</i>	Entrances to the parodoi, over which are the tribunalia, 5, 5.	<i>F.</i>	Portico at entrance of the Theatre Colonnade.
<i>B, B'.</i>	Entrances to passageway leading to left parodos of the Large Theatre.	<i>G, G'.</i>	Thoroughfare from Stabian St. to the Theatre Colonnade.
		<i>A.</i>	Small, low room under the stage.

tico (*F*) of the Theatre Colonnade, which in late times was transformed into barracks for gladiators;¹ the openings have the same width as those at *a, C*, and *C'*. The four doors open-

¹ See *Pompeii: Its Life and Art*, second edition, plan 3, and chap. XXIII.

ing at the rear of the postscænium (e, e', f, f') are narrow and all of the same width, $5\frac{1}{2}$ Roman feet.

The purpose of these many doors is not obvious. It must be determined, if at all, by considerations relating to the plan and use of the building. The designation of the building is not in doubt. On the inscription, preserved in duplicate, which gives us the names of the builders (*C.I.L.* X. 844), it is called a "roofed theatre," *theatrum tectum*. But if the inscription had not been preserved, the existence of a roof must have been inferred from the shape of the structure. The ends of the upper ranges of seats were cut off, not, as Nissen supposes,¹ because the architect was obliged to fit his building into a limited space, but rather in order to adapt it to the requirements of a rectangular plan, suitable for the construction of a roof; the depth might have been considerably increased without serious encroachment upon the area of the Large Theatre. That the roof must have been of wood is evident from the comparative thinness of the walls, which are too light to have sustained vaulting. The date of erection, which has been determined within narrow limits, may safely be placed within a couple of decades after the establishment of a Roman colony at Pompeii, in 80 B.C.

In most respects the plan does not differ from that of most Roman theatres; yet the building, with much probability, has generally been classed as an Odeum. The close association of such a structure with a large theatre has been frequently noted,² and it may well be that the Small Theatre in this and other cases was used for musical as well as dramatic exhibitions. It is, perhaps, not without significance, in relation to the use of the stage for theatrical performances, that a small, low room was built under the left end (Δ) with a separate wall at the rear, of the same height as the other walls supporting the stage (indicated on the Plan by broken lines), and an

¹ *Pompejanische Studien*, p. 240.

² See the list given by Müller, *Bühnenalterthümer*, p. 40, Anm. 3, and his characterization of an Odeum as a roofed theatre, p. 66.

opening into the oblong space under the middle. In ancient theatres the machine used for suspending gods and heroes in the air was at the left of the stage,¹ and was probably steadied by ropes running to pulleys underneath; in their scenic effects the ancients aimed at suggestion rather than illusion.

The two tribunals (*tribunalia*, 5, 5), resting on the vaults over the parodoi, together with the four rows of seats above



FIGURE 2.—VIEW OF THE SMALL THEATRE AT POMPEII. FROM THE INNER END OF THE LEFT PARODOS.

After *Pompeii: Its Life and Art*, second edition, fig. 67.

them, are entirely cut off from the seats of the adjoining cavea by a sloping stone parapet; the parapet on the west side, with the tribunal and the vault of the parodos underneath, is shown in Fig. 2. Entrance to the tribunals was made possible by narrow stone steps on the side of the stage (6, 6), which start from the floor of the stage near the front of the vaults over the parodoi, and ascend toward the outside wall; the last three

¹ Poll. IV, 128.

steps, at right angles with the rest, are cut in the side of the tribunal itself.

Our knowledge of the character and requirements of dramatic and musical exhibitions in the Roman period is so inadequate that explanations based upon them must remain purely conjectural. It cannot, however, be the result of accident that the doors at the ends of the stage (*C*, *C'*) and of the proscænum (*D*, *D'*) were made of the same width, and that this measurement, again, corresponds with the width of the "palace entrance," *a*. The suggestion that these doors were designed for the admission of light to the stage and dressing-room¹ is untenable. How the building was lighted we do not know. Taking account of its condition at the time of excavation, we may suppose that the roof was broken in by the earthquake of 63 A.D., and that, while the débris had been cleared away, a new roof had not yet been built; evidence in regard to the shape of the roof is therefore entirely lacking. A flat roof, however, with a rectangular opening in the middle for light and air, like the compluvium of the large atriums, is hardly to be thought of. The span, nearly 100 Roman feet, is so great that supporting columns would have been needed; such columns in a theatre would not have been tolerated by a Roman audience on account of their interference with the view, and there is no trace of a foundation of a base among the seats of the cavea. It is more likely that the building was covered by a low hip-roof supported on simple wooden trusses; but even in this case it is not necessary to assume an opening for light in the middle, as in the case of the Odeion of Herodes Atticus, which was about two and a half times as large. Gau reports that traces of columns "supporting the roof" were still to be seen on the top of the outside walls, and suggests that the spaces between them were left open "for the admission of light and air." So large a roof, resting entirely on columns, would have been insecure. It is more reasonable to

¹ Gau (Mazois, *Les ruines de Pompéi*, vol. IV, p. 55) speaks of *C'* as "l'es-pèce de fenêtre carrée qui donne sur le proscénium."

believe that the arrangement for admitting light was similar to that of the much older Basilica, as restored by Professor Mau (Fig. 3); that is, on the top of the outside wall, at the level of the higher portions now standing, sections of wall containing windows were built alternating with short rows of columns, the intercolumniations of which were left open. These were the columns of which traces were seen by Gau. When the roof fell in, at the time of the great earthquake, the columns and at least portions of the intervening sections of

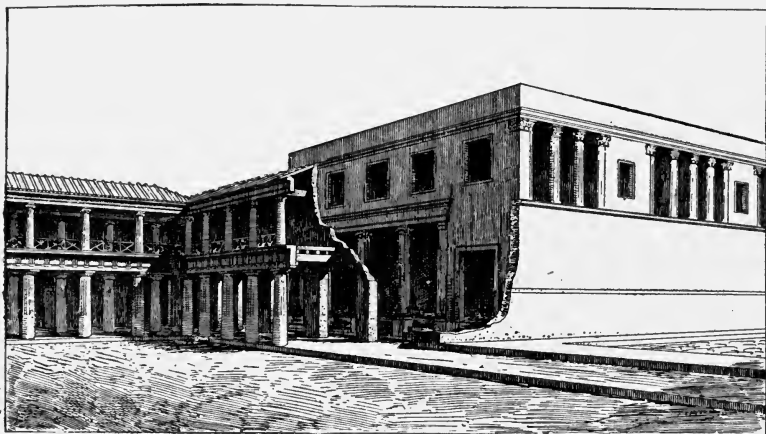


FIGURE 3. — EXTERIOR OF THE BASILICA AT POMPEII, AS RESTORED BY PROFESSOR MAU; AT THE LEFT, THE SOUTHWEST CORNER OF THE FORUM.

After *Pompeii: Its Life and Art*, fig. 25.

wall must have been shaken down with it. As the Pompeians cleared away the débris and resolved to leave the building unroofed, they naturally removed any remaining portions of the upper wall that had not been thrown down, so as to leave the outside of the building of a uniform height. The use of windows in an outside wall above the ranges of seats is well illustrated in the small theatre at Anemurion, in Cilicia.¹ We are warranted in believing that our building was lighted by means of openings in the upper wall; but in any case the light

¹ The similarity of this theatre to the Small Theatre at Pompeii was first recognized by Mazois (vol. IV, pp. 59-60, pl. 28).

furnished to the stage and dressing-room by the doors *C*, *C'*, *D*, *D'* would have been so inadequate that we must assume the admission of light from above.

The probable use of these large doors has been suggested by Professor Mau. We may reasonably assume for the Small Theatre at Pompeii, at least in the earlier decades, the introduction of processions at the opening of performances similar to those organized to inaugurate public exhibitions elsewhere. Such processions, at any rate before the Theatre Colonnade had been converted into gladiatorial barracks, probably started from the Forum or the court of the temple of Apollo, and after passing through the Forum Triangulare proceeded along the colonnade at the rear of the stage of the Large Theatre, entering the Small Theatre through the door at the west end of the stage (*C'*). Passing across the stage, they would leave the building by the opposite door (*C*). Stabian Street afforded no suitable place for disbanding; the colonnade at the side of the theatre therefore was so planned that the portion opposite the entrances *C* and *D* should have a greater depth than the rest, in order to make it possible for the processions to turn without being crowded and pass back through the dressing-room and the door *D'* to some place, apparently at the rear of the Large Theatre, where they could be disbanded. Two small entrances, one at each end of the stage—the *itinera versurarum* of Vitruvius—were required for the use of actors represented as coming from the city and from a distance; in the place of these, large entrances were made, as broad as the “palace door” at the middle of the stage, in order that the processions might be received and dismissed with becoming dignity; and since the processions could not conveniently make their way back through the narrow thoroughfare—doubtless crowded on gala days—between Stabian Street and the Theatre Colonnade (*G*, *G'*), similar doors, needed for no other purpose, were placed in the ends of the dressing-room.

To this explanation needs only to be added that the four large doors must ordinarily have been kept closed, whether a

performance was going on or not. If the doors were left open while a play or a musical exhibition was in progress, the preparations in the dressing-room and the performance on the stage must have been seriously disturbed by the noise outside and the crowding in of idlers; we must not assume that a Pompeian crowd on a holiday was less curious or mobile than an Italian crowd at Nola or Taranto on the occasion of a *festa*. If the Theatre was not in use, the doors at *C* and *C'* must have remained shut to prevent ready access to the board floor of the stage, which would have been ruined by the running across it; and it is reasonable to suppose that all the entrances of the dressing-room were kept closed on account of the storage of stage properties in it.

There remain to be considered the two narrow doors at *d* and *d'*. These were probably designed to give access to the two tribunals. There is no good reason for supposing that the Small Theatre was remodelled in antiquity¹ or that the tribunals, like those of the Large Theatre,² were an addition not contemplated in the original plan. During the period of almost a hundred and fifty years in which the Theatre was in use, repairs must have been made, and there has been some mending of the walls since excavation; but there is no evidence that points to a rebuilding. Unless further excavation about the foundations shall prove the contrary, we must believe that the vaults over the parodoi, together with the tribunals, and the doors *d*, *d'*, are a part of the structure as at first designed.

Assuming that the large doors *C'*, *C* were opened only for the entrance and exit of processions and for the occasional use of actors, we see that those entitled to the distinction of a seat on the tribunals³ might have reached the foot of the stairs leading to them in one of three ways:

First, by entering from the postscaenium through the doors

¹ Canina, *Arch. Antiqua*, vol. IX, p. 324.

² *C.I.L.*, X, 833, 834.

³ Portable chairs were used on the tribunals, as well as on the broad ledges of the ima cavea (Fig. 1, 1). Piranesi (*Il Teatro d' Ercolano*, pl. 9) gives reproductions of two bronze chairs found on the tribunals of the theatre at Herculaneum.

b and *c* and crossing the stage. It is impossible to believe, however, that the consistent usage of antiquity could have been so far set aside as to permit the use of these doors by any who were not performers; and in Satyr plays, for example, if such were presented here, they must have been entirely concealed behind the rustic scenery.

Second, by entering the building at *A* and *A'*, passing through the *parodoi* and mounting the stage by means of wooden steps. This would perhaps have involved a less serious offence against ancient taste than the use of the ordinary stage entrances. The wall at the front of the stage, unlike that of the Large Theatre, is straight, and presented an unbroken surface, being veneered with marble. If such a means of access to the tribunals had been contemplated, recourse would not have been had to wooden steps, like those set in place when needed for the use of the actors, but inconspicuous permanent steps would have been built in the front of the stage, at the ends.

Third, by entering from the *postscaenium* through the doors *d* and *d'*, and passing over the stage. The use of the doors in this connection obviously harmonizes with the conditions; before accepting it as the correct explanation, however, we must inquire whether the doors were probably needed for any other purpose.

Gau thought that these doors had something to do with the arrangements of the theatre, but were hidden from the view of the audience "by some decoration"; Wieseler¹ regarded them as designed to connect the *postscaenium* with side-wings, *para-skenia*. At first glance one might be inclined to look upon the two transverse supporting walls under the stage (Fig. 1: 7, 7) as foundations of side-wings; but if partitions, whether temporary or permanent, had been erected on these walls, they would have interfered with the view of a number of those having seats on or above the tribunals, and sufficient room would not have been left between them and the entrances *b* and *c* for the mounting

¹ *Theatergebäude und Denkmäler des Bühnenwesens*, p. 14.

of the triangular side-screens, or *periaktoi*. Three doors at the rear of the stage sufficed for the requirements of the Large Theatre, in its Romanized form; there is no apparent reason why a larger number should have been needed for the stage business of the Small Theatre.

The sections of wall *b-d* and *c-d'* measure 9 Roman feet, 2 inches; the distance from the wall, when covered with stucco, to the steps at the side of the tribunals was about 12.5 feet.

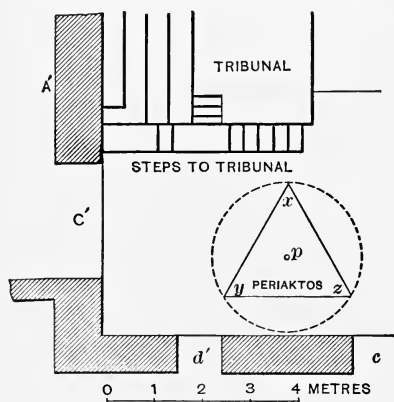


FIGURE 4.—DETAIL OF THE RIGHT END OF THE STAGE WITH A PERIAKTOS IN POSITION.

The adjustment of the periaktoi to these spaces may be illustrated by a simple diagram.

Let us assume that the sides of the periaktoi represented in Fig. 4 measure 9 feet, and that it revolves on a centre 5.4 feet from the rear wall, and equally distant from *c* and *d'*; the radius of the circle described will measure 5.2 feet. When the side *y-z* is parallel with the rear wall, the apex *x* is

1.9 feet from the side of the stairs ascending to the tribunal, and the side *y-z* is 2.6 feet from the wall; persons entering at *d'* would have no difficulty in passing around the corner *x* to the foot of the stairs, while the actor entering from the door *C'* at the end of the stage would go behind the periaktoi, between the side *y-z* and the wall, coming into the view of the audience as he advanced from the corner *z*.

We can only vainly conjecture what was the character of the paintings upon the sides of the periaktoi, the turning of which indicated a change of scene. It is obvious, however, that an upright strip of detached scene-painting less than 9 feet wide would not have been effective in an auditorium seating fifteen hundred people, in an age when opera glasses were as yet un-

known. If the periaktoi measured 9 feet on a side, however, the question arises how the procession at the beginning of a dramatic exhibition could have moved across the stage from one end to the other. As the framework of the periaktoi was doubtless light, they might have been set in place after the procession had passed through. It is also possible that they were simply turned around, for the time being, with an apex toward the rear wall; in that case the opposite side would have been 4.5 feet from the side of the tribunal stairs, and ample room would have been afforded for men to walk two abreast.

The use of the periaktoi is thus easily reconciled with the use of the large entrances *C*, *C'* for processions, and of the small doors *d*, *d'* by those having seats on the tribunals. The explanation offered is confirmed, so far as access to the tribunals is concerned, by the arrangements of the theatre at Herculaneum. Here a wooden bridge was built from the tribunal over the outer entrance to the stage to a door in the rear wall, from which stairs, at the end of the postscaenium, led down to the level of the ground outside; the arrangement is shown in both plan and section by Piranesi in his *Teatro d' Ercolano*, pls. 2 and 4.¹ At Pompeii probably the entrances *d* and *d'* were reserved for the use of those entitled to a place on the tribunals, and for their convenience also two outside doors, *e* and *e'*, were added; these would naturally have been placed opposite *d* and *d'*, but the four doors at the rear of the postscaenium were arranged with regard to a symmetrical distribution of the openings in the long façade. It may be that low wooden partitions, with doors that could be thrown open for the procession, were extended across the postscaenium in such a way as to make passageways at the ends connecting *e* with *d* and *e'* with *d'*; the middle space, with the three doors opening on the stage and two doors (*f*, *f'*) at the rear, would fully have answered the purpose of a dressing-room.

FRANCIS W. KELSEY.

¹ Cf. also Mazois, *Les ruines de Pompéi*, vol. IV, p. 72 and pl. 35.

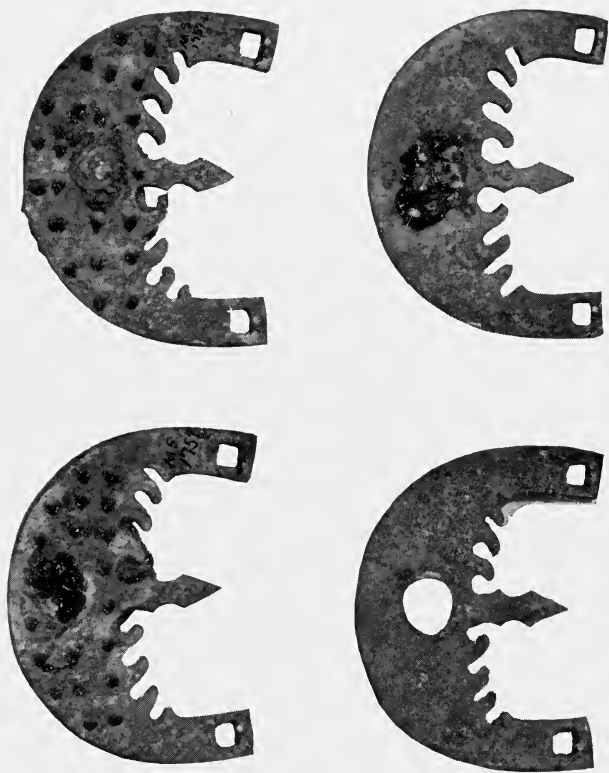
ETRUSCAN HORSESHOES FROM CORNETO

[PLATE XIV]

THE plate which accompanies this article (PLATE XIV) is a reproduction of a photograph of four bronze horseshoes found at Corneto, in ancient Etruria. These horseshoes were procured for the Free Museum of Science and Art of the University of Pennsylvania by Professor A. L. Frothingham, of Princeton, in 1897, and are now in the Museum in Philadelphia.¹ They were found in an Etruscan tomb dating probably from the fourth century B.C., and so far as the writer knows are the only ancient horseshoes in existence. With them was found part of the jaw of a horse with several teeth in it, and a deep, red-figured patera. The teeth are those of a horse about twelve years old. The patera, which is of Lower Italian ware dating from the fourth century, has on the inside an archaic Medusa head in red on a black background, and on the outside a wreath of black ivy leaves on a red ground.

The horseshoes, which are semicircular in shape, are of bronze, and covered a little more than half the foot. Their dimensions are as follows: Nos. 1 and 2, shown in the upper half of the plate, are each 0.125 m. broad, and their height when standing on their two ends is in each case 0.097 m. These were presumably the shoes of the two front feet of the horse. The shoes shown in the lower half of the plate are a

¹ The writer desires to express his thanks to the Curator, Mrs. Cornelius Stevenson, for permission to publish the horseshoes, and likewise to Professor Leonard Pearson, Dean of the Department of Veterinary Medicine of the University of Pennsylvania, for several valuable suggestions adopted in the paper.



ETRUSCAN HORSESHOES FROM CORNETO

little smaller. No. 3 (to the left) is 0.120 m. broad, and No. 4 (to the right), 0.121 m. Their height, when measured as above, is in each case 0.093 m. These seem to have been the shoes of the hind feet. The thickness of all the shoes is 0.004 m.

The outer surface, which rested on the ground, has prongs projecting from it, as shown in the two upper figures of the plate; while the inner surface is smooth. The prongs vary in number in the different shoes. Shoe No. 1 has 21 prongs; Nos. 2 and 3 have each 22; No. 4 has 19. Furthermore the prongs vary in length from 6 to 9.5 mm.

Each shoe has three holes for attaching it to the foot, — one round hole, 0.022 m. in diameter, in the middle of the shoe near the front, and two square holes, 0.01 m. square, at the ends. In three of the shoes the round hole is stopped up with a bunch of oxidized iron from the nail or rivet used to fasten on the shoe. In shoe No. 1 the oxidized part is about 6 cm. in diameter on the inner side, while on the outer side part of what looks like a nail may be seen projecting. The square holes show no trace of iron or other metal fastenings, and were presumably intended for straps. Each shoe has also a spike-like projection running toward the middle of the hoof, probably serving the useful purpose of protecting the inner part of the foot from loose stones.

The finding of these horseshoes at once excites speculation as to the extent to which horseshoes of metal were known to the Greeks and Romans. Were they in common use, and if so, at what period were they introduced? Hitherto it has been assumed that metal horseshoes were unknown to the ancient world.¹ References are found to shoes, or rather coverings of leather, felt, or coarse cloth, used on rough ground, but these were not intended for permanent use. We know that the Romans used for mules a sort of leather sock, strengthened underneath by a plate of iron (Catullus, 17, 26). It might be supposed that what was true of mules would also be true of horses; but there is no reference in the literature which can

¹ *E.g.* Baumeister, *Denkmäler*, p. 1432.

be cited to prove this. No other kind of horseshoe, in which metal was used, is mentioned by an ancient writer.¹

The question now arises as to whether the horseshoes in Philadelphia are to be connected with the muleshoe mentioned by Catullus or are to be regarded as something entirely different, and this involves the practical question of how these shoes were attached to the hoof. The oxidized lumps of iron in three of the shoes prove that an iron fastening passed through the round hole in each shoe. The lack of any trace of iron in the square holes, together with the fact that they are square, not round, makes it very probable that they were for the use of straps. A shoe of this character with such fastenings could be attached in one of two ways. (1) It might be attached to a plate of iron by a rivet, the iron being clamped around the edge of the hoof in front and perhaps at the sides, thus preventing the shoe from slipping back. Then straps might run from the two rear ends of the shoe around the ankle, crossing in front and being tied behind. This would keep the shoe from slipping forward. The clamp and the straps, then, together would hold the shoe firmly in place. (2) The bronze shoe might be attached to a low boot of leather, which might or might not have an iron plate as the sole. In this case the part of the boot in front of the hoof would prevent the slipping back of the shoe, and the straps below and behind would keep the shoe on and firmly in place. It seems likely that the horseshoes in Philadelphia were attached in this second way. These shoes then would resemble the muleshoes of Catullus, which could thus be shown to be Etruscan in origin.

Such a shoe as this is not very far removed from the horseshoe in use in Greece to-day. The modern Greek peasant takes a thin plate of iron large enough to cover the bottom of the foot of his horse or his donkey and nails it on with large-headed nails. These nails give the horse a foothold and prevent him from slipping. Such a shoe as this, if it existed in

¹ See M. H. Morgan, *Xenophon's Art of Horsemanship*, pp. 121 f., and the references there cited.

antiquity, would long since have disappeared through oxidation, so that it is hardly fair to say that horseshoes could not have been known to the ancient Greeks, at least in late Greek times. The fact that Xenophon makes no mention of such shoes would, however, seem to be conclusive for the earlier period.

The discovery of these bronze shoes at Corneto at least proves that horseshoes with a metal sole were known to the ancient Etruscans. Whether they were in common use or not is another question. If they were common and of bronze, it is certainly surprising that other specimens have not been found. If, however, they were of iron, their disappearance could be easily understood. But the prongs upon the shoes from Corneto must have been intended to give the horse a firm hold with his toe and so prevent slipping. It seems likely therefore that they were intended for use on ice or in a very hilly country. In either case their use would probably be the exception, not the rule.

The horse played an important part in the life of the ancient Etruscans, as numerous wall-paintings in Etruscan tombs testify. As part of the funeral ceremony he was frequently sacrificed at his master's grave and sometimes buried with him. Several instances are recorded of the finding in tombs in different parts of Etruria of the bones of a horse beside those of a man.¹ The horseshoes in Philadelphia, therefore, must be regarded as the shoes of a favorite horse slain at his master's grave. The excellent condition of the shoes proves that they were new, and were doubtless provided for the occasion, so that the horse might be well equipped to accompany his master to the other world.

So far in this paper it has been assumed that there could be no doubt as to the identification of the bronzes from Corneto as horseshoes. When the writer first studied them, the idea occurred to him that they might perhaps be bit-guards, after

¹ See Dennis, *Cities and Cemeteries of Etruria*, third ed., vol. I, pp. 276, 432, note 5, and 456. This explains why horse's bits of bronze are sometimes found in Etruscan tombs. The Museum in Philadelphia has three such bits.

the fashion of those illustrated by Gozzadini in his *Mors de cheval italiques*, pl. ii. But he soon felt satisfied that they were certainly horseshoes, and this opinion was confirmed by Dr. Pearson. Four reasons might be given to prove that they were not bit-guards. (1) They are too large for that purpose. (2) If they were so used, the prongs would necessarily be on the outside, and it is hard to see what would be the object in having them. (3) It would be necessary to have a bar or knob on each end of the bit to keep the guards from slipping off, but the prongs would interfere with such a bar or knob. (4) If to prevent this the bit and guards were fastened together so as to make one firm piece, we should expect the bit and guards to be of the same material; whereas the metal which passed through the middle hole of these bronzes was iron. For these reasons it seems extremely improbable that these bronzes from Corneto can have formed any part of the bit. On the other hand, they bear so close a resemblance to horseshoes both in size and shape that it is only reasonable to conclude that they were used for that purpose.

Corneto, or to be more exact, Tarquinii, the place where these bronzes were found, was one of the twelve chief cities of ancient Etruria and a very important place. Strictly speaking, the modern Corneto is about two miles from the ancient Tarquinii, which has long since ceased to exist.¹ The ancient cemetery lies between the two sites. It was discovered in 1823, since which time it has yielded thousands of vases as well as bronzes and other objects of archaeological interest. Its painted tombs have been famous for years.²

So far as the writer has been able to discover, no bronzes in any way resembling these horseshoes from Corneto have been found anywhere.³ Future excavations may bring to light

¹ It was finally destroyed by the Cornetans in 1307. See Dennis, *op. cit.* vol. I, p. 424 and note 4.

² Dennis, *op. cit.* vol. I, pp. 301-429.

³ A report reached me that there were some similar bronzes in a private collection in Perugia; but Professor Bellucci, the owner of the collection, informs me that neither in his own nor in any other collection in Perugia are there any objects resembling these. He adds that he is ready to believe that they are horseshoes.

others, but at present these unique specimens in Philadelphia must remain interesting reminders of how uncertain our knowledge is concerning many of the details of ancient life.

For convenience in reference, the following table is appended giving the dimensions of the horseshoes.

	Breadth.	Height.	Thickness.	Round Hole.	Square Hole.	Number of Prongs.
No. 1 . . .	0.125 m.	0.097 m.	0.004 m.	[0.022 m.]	0.01 m.	21
No. 2 . . .	0.125 m.	0.097 m.	0.004 m.	[0.022 m.]	0.01 m.	22
No. 3 . . .	0.120 m.	0.093 m.	0.004 m.	0.022 m.	0.01 m.	22
No. 4 . . .	0.121 m.	0.093 m.	0.004 m.	[0.022 m.]	0.01 m.	19

Prongs 0.006 to 0.0095 m. high. Oxidized part on No. 1 0.06 m. in diameter.

WILLIAM NICKERSON BATES.

NUMISMATIC NOTES

I. A HOARD OF ROMAN COINS FROM TARQUINII

AT the end of June, 1898, in digging the foundations for a small farm-building at about six kilometers to the north of Corneto-Tarquinia, near the church of the Madonna del Valverde, the workmen came upon a small hoard of coins welded together into an almost solid mass. They were not in a receptacle of any kind, but lay directly in the ground; and the rounded form of the mass showed that they had been buried or lost in a bag, or purse. The lump was brought to me almost as found, with but a few coins loosened from the others; and I think I may assume that none were missing.

In this state, the coins were quite undecipherable, being welded together with a very heavy oxidation. It required no little care, by the use, first, of lemon-juice, then of dilute nitric acid, and finally with a little soaking in alcohol, to bring out the various types. A few, indeed were so badly corroded that they broke with the slightest touch. I was able to distinguish, when separated, 178 coins; but 22 of these were beyond identification, either through breakage or extreme oxidation. Of the 156 remaining, all but 18 came out very clearly, and these latter could be assigned only to their proper reign.

The list below presents ten portraits, from Gordianus Pius (238-244 A.D.) to Gallienus (254-268 A.D.). The latest in date seem to be No. 8 of Gallienus, which may best be referred to 259, after his defeat of the Alemanni at Mediolanum; and No. 4 of the same emperor, where the legend LAETITIA AVG. (instead of AVGG., as on the others) points to a date after the capture

of Valerian by Sapor in 260. Probably the hoard was lost or buried in 260, or shortly after.

All the coins are base *antoniniani* of the period, with the characteristic radiate crown or crescent, which therefore are not specified in the list below. Five coins of Gordianus Pius, one of Decius, and four of Valerian were gilt to pass as *aurei*. The types, in general, are common and well known. I have numbered them according to Cohen. It will be seen that five variants do not occur in his lists.

GORDIANUS PIUS. 238-244 A.D.

1. Obv. IMP. GORDIANVS PIVS FEL. AVG.		
Rev. FELICIT. TEMP. Felicitas l., with caduceus and cornucopia. C. 71. Two specimens gilt	2	
2. Rev. LAETITIA AVG. N. Laetitia l., with wreath and anchor. C. 120. Gilt	1	
3. Rev. LIBERALITAS AVG. II. Liberalitas l. C. 132	1	
4. Rev. MARS PROPVG. Mars r., with spear and shield. C. 156	2	
5. Obv. IMP. CAES. M. ANT. GORDIANVS AVG.		
Rev. PROVIDENTIA AVG. Providentia l., with globe and sceptre. C. 302	1	
6. Obv. As No. 1.		
Rev. VICTORIA AETER. Victory l., with shield. C. 349	2	
7. Obv. As No. 5.		
Rev. VICTORIA AVG. Victory l., with wreath and palm-branch. C. 357. Gilt	1	
8. Rev. VIRTVS AVG. Virtus l., with shield and reversed spear. C. 381. One specimen gilt	2	
9. Obv. As No. 1.		
Rev. VIRTVTI AVGVSTI. Hercules "Farnese." C. 404	1	
Uncertain of Gordianus Pius	4	
(Total of Gordianus Pius, 17.)		

PHILIP I. 244-249 A.D.

1. Obv. IMP. M. IVL. PHILIPPVS AVG.		
Rev. AEQVITAS AVGG. Aequitas l., with scales and cornucopia. With AVGG., not in C.; cf. C. 9	1	
Carried forward	18	

Brought forward	18
2. Rev. P. M. TR. P. III. COS. P. P. (246 A.D.) Peace l., with caduceus and cornucopia. C. 124	2
3. Rev. ROMAE AETERNAE. Rome seated l. C. 165	2
4. Obv. IMP. PHILIPPVS AVG. Rev. SAECVLARES AVGG. (248 A.D.) Cippus inscribed COS. III. C. 193	1
5. Rev. SAECVLVM NOVVM. (248 A.D.) Temple. C. 198	1
6. Rev. TRANQVILLITAS AVGG. In the field, B. Tranquil- litas l. C. 223	1
(Total of Philip I, 8.)	

OTACILIA SEVERA PHILIPPI

1. Obv. MARCIA OTACILIA SEVERA AVG. Rev. SAECVLARES AVGG. (248 A.D.) In the exergue, IIII. Hippopotamus r. Not in C.; cf. his 63-64, with- out MARCIA	1
(Total of Otacilia, 1.)	

TRAIANUS DECIUS. 249-251 A.D.

1. Obv. IMP. C. M. Q. TRAIANVS DECIVS AVG. Rev. ADVENTVS AVG. Decius on horseback l. C. 4. Gilt	1
2. Rev. GENIVS EXERC. ILLYRICIANI. Genius l., with patera, cornucopia, and standards. C. 49.	2
Uncertain of Decius	1
(Total of Decius, 4.)	

HERENNIA ETRUSCILLA DECI

1. Obv. HER. ETRVSCILLA AVG. Rev. PVDICITIA AVG. Pudicitia seated l. C. 19	2
(Total of Etruscilla, 2.)	

TREBONIANUS GALLUS. 251-253 A.D.

1. Obv. IMP. CAE. C. VIB. TREB. GALLVS AVG. Rev. APOLL. SALVTARI. Apollo l., with laurel-branch and lyre. C. 20	1
2. Rev. FELICITAS PVBLICA. Felicitas resting on column l., with caduceus and wand. C. 41	2
Carried forward	35

Brought forward	35
3. Obv. IMP. C. C. VIB. TREB. GALLVS AVG. Rev. IVNO MARTIALIS. Juno seated l., with corn-ears and wand. C. 46	1
4. Obv. AS NO. 1. Rev. LIBERTAS AVGG. Liberty l., leaning on column, with cap and wand. C. 67	2
5. Rev. PIETAS AVGG. Pietas raising her hands. C. 84	1
6. Obv. AS NO. 3. Rev. AS NO. 5, with an altar at l. C. 88	2
7. Obv. AS NO. 1. Rev. P. M. TR. P. IIII. COS. II. Figure l., with branch	1
(Total of Gallus, 10.)	

VOLUSIANUS. 242-254 A.D.

1. Obv. IMP. CAE. C. VIB. VOLVSIANO AVG. Rev. CONCORDIA AVGG. Concordia l., with patera and double cornucopia. C. 20	1
2. Rev. PIETAS AVGG. Pietas l. at altar. C. 88	1
3. Rev. VIRTVS AVG. In the field, a star. Virtus l. C. 135	1
(Total of Volusian, 3.)	

VALERIANUS. 254-260 A.D.

1. Obv. IMP. C. P. LIC. VALERIANVS P. F. AVG. Rev. APOLINI CONSERVA. Apollo l., with laurel and lyre. C. 17. Two specimens gilt	29
2. Obv. IMP. C. P. LIC. VALERIANVS AVG. Rev. AS last. C. 18	9
3. Rev. CONCORDIA EXERCIT. Concordia l., with patera and double cornucopia. C. 39	1
4. Obv. AS NO. 1. Rev. FELICITAS AVGG. Felicitas l., with caduceus and cornucopia. C. 53	7
5. Obv. AS NO. 2. Rev. AS NO. 4. C. 55	2
6. Rev. FIDES MILITVM. Fides l., with two standards. C. 65. One specimen gilt	5
7. Obv. IMP. C. P. LI. VALERIANVS AVG. Rev. AS last. With LI. for LIC., <i>not in Cohen</i>	1
Carried forward	99

Brought forward	99
8. Obv. As No. 2.	
Rev. IOVI CONSERVA. Jupiter l., with fulmen and sceptre.	
C. 83	4
9. Obv. As No. 1.	
Rev. As last. <i>Not in Cohen</i>	1
10. Obv. As No. 2.	
Rev. IOVI CONSERVATORI. Type as last. C. 94	1
11. Rev. P. M. TR. P. II. COS. II. P. P. Same type. C. 156	1
12. Rev. VICTORIA AVGG. Victory l., with wreath and palm-branch. C. 218	8
13. Obv. As No. 1.	
Rev. As last. C. 224. One specimen gilt	7
14. Rev. VICTORIAE AVGG. IT. GERM. Victory l., with captive. C. 242	1
Uncertain of Valerian	12
(Total of Valerian, 89.)	

GALLIENUS. 254-268 A.D.

1. Obv. IMP. C. P. LIC. GALLIENVS P. F. AVG.	
Rev. APOLINI CONSERVA. Apollo l., with laurel and lyre.	
C. 66	1
2. Obv. IMP. C. P. LIC. GALLIENVS AVG.	
Rev. CONCORDIA EXERCIT. Concordia l., with patera and double cornucopia. C. 131	2
3. Obv. As No. 1.	
Rev. FELICITAS AVGG. Felicitas l., with caduceus and cornucopia. C. 195	1
4. Obv. As No. 2.	
Rev. LAETITIA AVG. Laetitia l., with wreath and anchor.	
C. 430	2
5. Obv. As No. 1.	
Rev. As last. C. 435	1
6. Rev. LIBERALITAS AVGG. Liberalitas l., with tessera and cornucopia. C. 571	1
7. Rev. PROVIDENTIA AVGG. Providentia l., with wand and cornucopia. C. 888	2
8. Rev. VICTORIAE AVGG. IT. GERM. Victory and captive.	
C. 1198	2
Carried forward	146

Brought forward 146

9. Obv. As No. 2.

Rev. VIRTVS AVGG. Virtus l., with shield and spear.

C. 1288 2

Uncertain of Gallienus 1

(Total of Gallienus, 15.)

SALONINA GALLIENI

1. Obv. SALONINA AVG.

Rev. CONCORDIA AVG. Concordia seated l. C. 28 . . . 1

2. Rev. IVNO REGINA. Juno l., with patera and sceptre.

C. 60 5

Uncertain of Salonina 1

(Total of Salonina, 7.)

Coins wholly unidentified 22

Total coins in hoard 178

GEORGE N. OLCOTT.

COLUMBIA UNIVERSITY.

ON THE "MOURNING ATHENA" RELIEF

ON the great Eleusinian relief at Athens the very different style of the two female figures has been explained by the assumption that the artist copied types already familiar in statues of these goddesses. The recurrence of the same figures in different groupings elsewhere lends credence to this view, and furnishes important data for naming them as they appear on the relief from Eleusis.¹ The same principle, I believe, will throw some light on the fascinating relief in the Acropolis Museum which goes by the name of the "Mourning Athena"² (Fig. 1).

The conclusions of Graef,³ who has made a careful study of this relief and its position in the history of Greek art, readily command assent. Even apart from the disproportionate development of the lower part of the face, which Graef emphasizes as the marked characteristic of Peloponnesian art, it is evident that there is some connection between this relief and, *e.g.*, the sculptures of the temple of Zeus at Olympia. The lines of the profile and the treatment of hair and eye recall the heads of the Olympia pediments; the folds of the garment are like those in the garment of Sterope, and the position of the arms like the arms of Oenomaus; while in the treatment of the breast, the muscles of the left upper arm, and the garment about the left arm, this Athena closely resembles the Athena (or nymph) of the Atlas metope. The main interest of this Athena, however, lies first in the charm which attends the simple, delicate model-

¹ Roscher, *Lexikon*, II, 1349 f.

² *Δελτιον*, 1888, p. 103, 123.

³ *Ath. Mitth.* XV, pp. 22 f.

ling of the face and neck, and secondly in the mystery which still veils the meaning of the action here depicted.

That the figure is adapted from a statue seems to me probable from certain inconsistencies in its treatment. In particular the folds of the drapery below the girdle are not perpendicular, but the line of their fall corresponds exactly to the inclination of the whole figure; *i.e.* the maker of the relief worked from an erect figure, the inclination of which he changed in a somewhat mechanical way. Moreover, the folds of the garment are not disturbed by the bending of the left knee, and the only deviation from the perpendicular *schema* is the slight lifting of the lower line of the garment. From these facts we should infer that the artist was working from a figure somewhat like the Vesta Giustiniani, a statue erect, standing squarely on both feet, the spear probably erect and a little out from the body, while the right hand rests on the hip, as, *e.g.*, in the Olympia Oenomaus. The inclination of the head might be original, or it might be part of the adaptation to the relief.¹

Such an Athena statue has been modified to represent an Athena at rest, and bending her head down toward a pillar. It is the received opinion that this "pillar" represents an inscribed stele;² and perhaps this opinion receives additional support from a lekythos in the National Museum at Athens,³ on which we see Athena standing beside a wide stele of the type ordinarily used for inscriptions. On the other hand it should be noted that a high slender pillar of this type is almost never used for inscriptions; Graef cites a single instance, and it would be difficult to find others. Perhaps it is unreasonable to urge that Athena is not in a position where she could read an inscription if it were there, yet the point does make this theory less satisfactory. M. Lechat⁴ rejects this theory

¹ The facts pointed out in this paragraph would lead me to reject the suggestion of M. Lechat, in the article referred to below, that the maker of this relief drew his inspiration from some well-known painting rather than from a statue.

² A list of dead Athenians, *Jour. Hell. Stud.* X, 267; Athenian treasury accounts, *Ath. Mitth.* XV, 24 f.

³ Exhibition number 1061.

⁴ *Monuments et mémoires* (Fondation E. Piot), III, 5 f.

entirely, and makes the interesting suggestion that Athena is looking down at the figure of Erichthonius represented on top of this column. One will readily grant that such a small figure might have been painted rather than carved, as was probably the case with some other details on this very relief. If Erich-



FIGURE 1.—THE "MOURNING ATHENA."

thonius the *child* were depicted, the result would not be unlike the Athena and child on a vase in Paris (Salle L, no. 63; Benndorf, *G.S.V.* pl. xxxi, 1). M. Lechat, however, rejects this hypothesis, and propounds the theory that Erichthonius is represented as a *serpent* issuing from a *cista*, which *cista* would serve as a capital for the column. The weak point in M. Lechat's argument is that he can produce no analogy for a column without some sort of a capital on which the *cista* might rest, nor is it really conceivable that a col-

umn without a capital would be used for this purpose. A round basket does not in any sense serve as a capital for a square pillar. If this pillar were a column supporting a votive figure (the figure of a child, or a *cista* with serpent), it would almost certainly have had an abacus block in relief on which the figure would rest. It may be added that there is no reason why Erichthonius in either form should be represented on a *pillar* before

Athena. — It has already been pointed out by Graef that the god with bowed head which often appears on Greek reliefs is a god who looks down graciously on his worshippers.¹ I see no reason for adopting a different explanation in this instance. As for the pillar, it should be noted that this type of pillar on vases ordinarily denotes the *meta* or goal-post of the race-course.² Certainly it is simpler not to treat this pillar as an inscribed stele or as a column with figure added in paint, both of which explanations make large demands on the imagination, but to treat it as the symbol of the palaestra. In that case Athena is looking down, not indeed at the post, but at the worshippers who are wont to exercise in its vicinity. That the goddess of the Academy and of the Panathenaea should be thought of as presiding over the palaestra, is at Athens not at all unnatural.

The theory that the Athena on this relief is adapted from a statue receives some slight support from another lekythos in



FIGURE 2. — LEKYTHOS IN THE NATIONAL MUSEUM AT ATHENS.

¹ Graef cites the Heracles on a relief published by Schoene, *Griech. Reliefs*, xxvii, no. 112.

² *E.g.* Munich *Cat.*, Jahn 199; British Museum *Cat.* III, E 389, cf. E 631; Gerhard, *Aus. Vas.* 131 (chariot race); Roulez, *Vases peints de Leyde*, pl. xvii, 2.

the National Museum at Athens¹ (Fig. 2). This vase is one of the numerous lekythoi with white slip which were found in Euboea in the later part of the decade between 1880 and 1890. It belongs with a series of lekythoi with hard brownish-yellow slip on which the scene is drawn in thin yellow glaze; dull color (or black) is applied in solid masses for garments, and ordinarily the flesh of women is indicated by the use of white enamel paint. On the earlier members of the series the shoulder is left red, as on the present vase, and three (or five) palmettes with scrolls ornament the shoulder. Probably all these lekythoi were made about the same time, and that not far from the middle of the fifth century B.C. The peculiarity of the present vase is that the flesh of Athena is painted a dull pink, instead of the usual white, as the foundation on which the details are added in glaze. The only other instance of pink used in this way on lekythoi of this period, so far as I am aware, is on a lekythos in the Louvre,² which is probably from the same hand.

The Athena on the lekythos at Athens at once recalls the Athena of the well-known relief. The attitude is very much the same, except that the legs and feet are drawn after a lekythos type,³ and the spear is held erect, out from the body.

¹ Athens, Nat. Mus. 1968 (960). Height, 0.293 m.; circumference, 0.305 m. The red of the clay is slightly darkened by a glaze. On the red shoulder are three palmettes with nine leaves each. Slip thin and smooth, greenish yellow. The complicated maeander is interrupted by horizontal crosses. Flesh pink, garment light red. Preliminary sketch in the soft surface with a dull point.

Athena stands *en face*, head bowed to the right, before an unfluted column. Her right hand rests on the hip, and her left hand is extended holding a spear erect. She wears a sleeveless peplos with free overfold, and snake aegis of the collar type; the hair falls free behind, and is held by a wide red taenia about the head. The ear is reversed, the left shoulder does not connect with the neck, and at other points the drawing is rude.

I am indebted to M. Tsountas, ephor of antiquities at Athens, for the following statement in regard to this vase: "The exact date of its discovery is not known, and the only fact obtainable is that it came from a grave on the estate of one Nostraki, who dug by the permission of the authorities."

² Louvre, CA 9: Ephebos wearing chlamys, petasos, etc., stands to left holding a spear in right hand. Behind him is a fluted column.

³ *E.g.* the youth on the lekythos at Athens (3525) 1825, published by Weiss-häupl in *Ath. Mitth.* XV, Taf. i. This type, however, is not common in the class of lekythoi on which white is used for the flesh of women.

The garment also and the hair are unlike those on the relief, but these again reproduce types with which the vase painter was familiar. In a word, with the exception of the position of the spear the difference between vase and relief are just what one would expect when the vase painter drew his inspiration from a statue or relief.

If the lekythos be accepted as genuine, and I find no sufficient reason to doubt its genuineness, we must raise the question as to its relation to the "Mourning Athena" relief. It is scarcely possible that the vase painter worked with this particular relief before him. Apart from the fact that a vase painter would be most unlikely to reproduce a then insignificant relief, we have no assurance that the relief is older than the vase; in fact, the presumption is, it seems to me, that the vase is older. The somewhat archaic character of the relief is best explained on the supposition that the statue which suggested it belonged to the period when Peloponnesian art was exerting an important influence on Athenian sculptors; while the statue, then, would be earlier than the middle of the fifth century, there is reason to think that the relief belongs to the second half of the century. Furthermore, it is not easy to account for the adaptation of the relief figure so that we should get from it the Athena on this vase. Granted that the vase is not directly dependent on the relief, we must assume that in so far as the vase and the relief have any connection with each other, it is due to antecedents of both. If the relief is based on a statue of Athena of a date not far from the middle of the fifth century B.C., probably the vase was inspired by the same statue.¹

Even if admitted as evidence, the lekythos contributes very little to our positive knowledge of such a statue. The column is a familiar convention of the vase painter to indicate a temple, and suggests that we are dealing with a temple statue. Again, it seems to me very probable that the painter has re-

¹ Loeschcke (*Ath. Mitth.* V, p. 381) has pointed out another specimen of ware with white slip on which it is probable that a statue is represented.

produced the correct attitude of the left hand and spear, while the maker of the relief, on the other hand, in giving an inclination to the whole figure has changed the left arm and spear in order to give some support to the figure in this new posture. The most important fact in this connection is that on both relief and vase the head of Athena is bent forward. If vase and relief are witnesses to a statue, it is a statue with the head bent forward, and the posture of the head was not invented by the sculptor of the relief. The main value of the vase, however, is that it does add some slight confirmation to what the relief suggests, in regard to a statue of Athena otherwise unknown to us.

ARTHUR FAIRBANKS.

"THE ARGIVE HERAEUM" ¹

THE site of the famous sanctuary of Hera at Argos was excavated by members of the American School of Classical Studies at Athens, under the leadership of Professor Waldstein, during the years between 1891 and 1895. Since that time, Professor Waldstein and his collaborators, most of whom were also associated with him in the work of excavation, have been busily engaged in preparing their finds for publication, with the result that the first volume has already appeared and the second is promised for the near future. We fulfil the promise made in the last number of the *Journal* by publishing here a brief description of the work, and especially of the contents of the first volume.

The contributors to the first volume include the editor, Professor Waldstein, who has written the General Introduction and the chapter which deals with the Marble Statuary; Dr. Henry S. Washington, formerly of Yale University, who writes upon the Geology of the Heraeum Region; Mr. Edward L. Tilton, of New York, who discusses the Architecture of the Heraeum; Professor Rufus B. Richardson, Director of the

¹ *The Argive Heraeum*. By Charles Waldstein, Ph.D., L.H.D., Litt.D., sometime Director of the American School of Classical Studies at Athens, University Reader in Classical Archaeology, and Fellow of King's College, Cambridge, etc., etc. With the coöperation of George Henry Chase, Herbert Fletcher De Cou, Theodore Woolsey Heermance, Joseph Clark Hoppin, Albert Morton Lythgoe, Richard Norton, Rufus Byam Richardson, Edward Lippincott Tilton, Henry Stephens Washington, and James Rignall Wheeler. In two volumes. Volume I: General Introduction, Geology, Architecture, Marble Statuary, and Inscriptions. Imperial quarto. Pp. xxii, 231. Boston and New York: Houghton, Mifflin & Co., 1902.

American School of Classical Studies at Athens, and Professor James R. Wheeler, of Columbia University, who publish together the Inscriptions on stone and the stamped tiles found upon the site. The work is published for the Archaeological Institute of America and the American School of Classical Studies at Athens, and is brought out under the supervision of a committee of six, including Professor John Williams White, of Harvard University, Professor Harold N. Fowler, of Western Reserve University, and Mr. Edward Robinson, Director of the Boston Museum of Fine Arts, on behalf of the Institute; and Professor Thomas D. Seymour, of Yale University, Professor James R. Wheeler, of Columbia University, and Professor John H. Wright, of Harvard University, on behalf of the School at Athens. It is dedicated, most appropriately, to Professor Charles Eliot Norton, the first President of the Institute.

In his General Introduction, Professor Waldstein first discusses the antiquity and significance of the cult of the Argive Hera, from which, he maintains, all other cults of the goddess, including the famous one at Samos, were derived. Then follows an account of the early history of the site, including a critical examination of the Argive genealogies of Pausanias. The foundation of the Heraeum is asserted to have taken place well before 2000 B.C., and evidence of the successive domination of Tiryns, Mycenae, and Argos in the plain is found in the orientation of the various buildings. The finds of small objects, terra-cotta images, vases, and bronzes, are briefly examined, and found to confirm the evidences of topography and tradition as to the early occupation of the site. Especially interesting is Professor Waldstein's view that the principle of linear ornamentation can be traced from the earliest prehistoric times straight through the Mycenaean period until it culminates in the fine "Proto-Corinthian" ware, for which Dr. Hoppin has, with good reason, proposed the name "Argive." All the evidence, in fact, tends to prove that "there existed a continuous worship on this site for many

generations preceding the Mycenaean age," a continuity which "speaks for the unbroken continuance of an early population subject to changes in its social and political life — but always there." The Introduction ends with a history of previous excavations at the Heraeum and an account of the campaigns of 1892, 1893, and 1894.

Dr. Washington's chapter not only contains an exact description of the geological formation of the Argive plain, but also discusses most interestingly the causes which bring about the burial of ancient sites in general, and the special causes of the destruction of the Heraeum, and concludes with a note on the igneous rocks found at the excavations.

In the chapter on Architecture, Mr. Tilton has given a detailed and accurate description of all the architectural remains, including the Cyclopean and later walls, the well-known marble cyma with anthemion and cuckoo from the Second Temple, and the painted terra-cotta fragments, all fully illustrated with half-tones from photographs and with plans and drawings, many of which are of great size and beauty. Especially interesting are his restorations of the Second Temple and the numerous Stoaë. His discovery of certain principles of proportion in the plan and elevation of the Second Temple are sure to command wide attention among students of architecture both ancient and modern.

The Marble Statuary includes but few specimens of single statues. The greater part of the mass of marble fragments which were brought to light during the excavations are of one date and style of workmanship, and are to be assigned to the sculptures of the Second Temple, which must have been erected not long after 423 B.C. Professor Waldstein concludes, from the evidence of these fragments and the description of Pausanias, that in the eastern pediment was represented the Birth of Zeus; in the western, the Capture of Troy. The eastern metopes contained scenes from the Gigantomachia; the western, representations from the Trojan War. These scenes may have overlapped to either side. But the bulk of the metopes on the sides of the

temple were decorated with the Amazonomachia, and possibly the Centauromachia, or some similar mythological subject, although no traces of the latter are to be found in the extant fragments. The style of the sculptures is discussed at length. The treatment of the heads is shown to be distinctly more archaic than that of the bodies. All the evidence points to the school of Polycleitus, and to this school, therefore, the sculptures are to be assigned. This leads, naturally, to a discussion of the style of Polycleitus in the light of this new evidence, which is a distinct contribution to our knowledge of the Argive artist. The Doryphorus is shown to belong to the earlier period of Polycleitus (about 450 B.C.); the Diadumenus and the Heraeum marbles, to a later and far more advanced period. The chapter concludes with a description of the plates which accompany this part of the book.

Of the Inscriptions the most interesting is a list of four hieromnemons, which contains the earliest known mention of the four Doric tribes (before 500 B.C.). There are also a number of dedications and fragments of records, in which the hieromnemons are frequently mentioned. Several stamped tiles bear the inscription, *Σωκλῆς ἀρχιτέκτων*, while others are stamped with the names of other officials. The earlier inscriptions often present forms of letters hitherto unknown at Argos. The inscriptions on bronze and on vases are reserved for discussion in the second volume.

The letter-press of the book deserves nothing but praise. This magnificent volume may be favorably compared with the best French and German work. Praiseworthy, too, is the fulness with which all parts of the volume are illustrated from photographs and drawings, the number of the text illustrations being no less than ninety, not including small woodcuts, the number of the plates forty-one. Among the plates, Mr. Tilton's plans and restorations deserve special mention, particularly his restoration in colors of the whole site, while the ten heliogravure plates which reproduce the more important sculptures are executed in the highest style of the art.

It is evident, even from this brief survey of the contents of the book, that *The Argive Heraeum* contains much that is suggestive and interesting to many readers. Whether or not we agree with Professor Waldstein's theories, they will have to be reckoned with by later investigators, especially in the fields of prehistoric antiquities and the history of sculpture. The work commends itself not only to the classical archaeologist, but to architects and artists — in fact, to all students and lovers of art and antiquity.

The second volume, which will contain a detailed account of much of the material upon which Professor Waldstein has based his conclusions, will include the following chapters: Terra-cotta Figurines, by Professor Waldstein and Dr. George H. Chase, of Harvard University; Terra-cotta Reliefs, by Professor Waldstein and Professor Joseph Clark Hoppin, of Bryn Mawr College; Vases and Vase-fragments, by Professor Hoppin and Professor Waldstein, with an Appendix on Vase-inscriptions, by Dr. T. W. Heermance, now Secretary of the School at Athens; Bronzes, including inscriptions on bronze, by Mr. H. F. De Cou, now Secretary of the School at Rome; Engraved Stones, Gems, and Golden Objects, by Professor Richard Norton, now Director of the School at Rome; and Egyptian Objects, by Mr. A. M. Lythgoe, now connected with the University of California Archaeological Expedition to Egypt, which is maintained by Mrs. Hearst.

The second volume will undoubtedly confirm the conviction which was expressed upon the appearance of the first volume that, in *The Argive Heraeum*, American scholarship has made its most important single contribution to classical archaeology. It yet remains to be seen whether the work now going on at Corinth may not prove to be equally significant.

American School
of Classical Studies
at Athens

VARIOUS STATUES FROM CORINTH¹

[PLATES XV, XVI]

ALTHOUGH the yield of statuary from the excavations at Corinth has not kept pace with the rapidly accumulating evidence which establishes the topography of the city, still there have been brought to light, from year to year, statues and fragments of statues, some of which are here briefly described.

In the second century of our era Pausanias wrote that the remarkable objects in Corinth included some remains of the ancient city, but that most of them dated from the period of the restoration (46 B.C.).² The town, as disclosed by the excavations thus far, has nothing to offer in contradiction to this observation. Besides the two lions' heads which probably ornamented the fountain of Glauce, almost no piece of sculpture has been found which can be vouched for with certainty as dating from the old Greek times. It is remarkable that, in so large and wealthy a place, Pausanias saw but few pieces of statuary to which the name of a famous artist was attached. In the five chapters which he devotes to his account of Corinth, he mentions many curious and notable works, but only twice does he connect any of them with the name of its sculptor; and of these two names, one is of the legendary Daedalus, one of the obscure Hermogenes of Cythera. Evidently the people of the Roman Colonia Julia were content to revive the glory of Greek art by means of copies, and did not secure masterpieces of an earlier time.

¹ The author of this paper, a promising and beloved member of the School at Athens in 1899-1900, was drowned in the Nile, March 24, 1900.—Ed.

² Paus. II, 2, 6.



COLOSSAL FEMALE FIGURE FROM CORINTH



SECOND COLOSSAL FEMALE FIGURE FROM CORINTH

LIONS' HEADS

Of undoubted Greek workmanship are two lions' heads (Fig. 1) found in 1899 during the clearing of the fountain-house of Glauce. They were lying in the basin in front of the main spring-house, at a depth of eight or nine feet. The lower jaws are lacking, and the lower part of the snout of one is a little broken on its left, but in other respects the heads are preserved intact. Projecting from the mane of one of the lions is a fragment of a horizontal band with the beginning of an ornament, perhaps a vine. From this it would appear that the heads were attached to a strip of marble which must have run along the edge of the parapet at the front of the fountain.

The lions' heads are characterized by a certain show of life, which is kept well in bounds. In this respect they fall between the very energetic heads of the Tholos at Epidaurus and the absolutely expressionless heads on the large marble cornice blocks of Roman times found in Corinth north of Pirene. The restraint just mentioned, and a certain schematic arrangement of the locks of the mane, might place them chronologically earlier than the heads at Epidaurus and nearer to the lions' heads from the Parthenon. They are probably, at least, as early as the period to which the beautiful, but now much mutilated, Greek workmanship on Pirene may be referred.



FIGURE 1. — TWO LIONS' HEADS FROM THE FOUNTAIN OF GLAUCE, IN CORINTH; A LATE MALE PORTRAIT HEAD.

ROMAN PORTRAIT STATUE OF A WOMAN

In process of the work in 1898 a female portrait statue, of a type common in the Roman period, was brought to light (Fig. 2). There are lacking the head, which was set in separately, the left hand, which was dowelled on, the right hand, from above the elbow; the feet are broken away, but the



FIGURE 2. — ROMAN PORTRAIT
STATUE OF A WOMAN, FROM
CORINTH.

drapery is perfect to the plinth, which is also preserved. The figure is clad in a long chiton, which just touches the ground, and in an ample himation, which envelops nearly the whole figure, and one end of which was held in the right hand at the height of the breast, whence it fell over the left arm, in a way which recurs frequently in Roman portrait figures. The himation was not drawn over the head, as was usual in statues representing matrons, but was wrapped around the shoulders, in a mode adopted by the maidens of the period. A noticeable feature of the mutilation of the statue is the break left by the right arm across the front of the body. This is not a rough, irregular breakage, but is a smooth concave surface pitted all over with small chisel-marks. Evidently the arm was wrought separately, and placed upon this surface formed to receive it and thus roughened to make the cement more tenacious. The close small folds of the chiton are a plain indication of its material, — linen. The mantle is draped in lines following carefully the contours of the body, but yet allowing of a certain ample and large treatment unbroken by too many fine lines or deep creases. The pleasing manner of gathering the mantle under

the left arm, so that the folds seem to centre there and to radiate thence horizontally across the body and obliquely toward the advanced right knee, is a motive which later sculptors owed to Attic art and which had been familiar since the fourth century B.C. Roman artists, or Greeks working for Roman masters, felt they could not do better than adapt the old successful style to the new conditions of subject and mode.

The chief difficulty that confronts us in this statue is that of determining its period. Here the head, which would be of capital importance by reason of its coiffure, is not at our disposal. Of analogies, however, there is a sufficiency. We have to do with a Roman copy of a very prevalent portrait type, which it may be possible to trace back as far as the fourth century. Our statue is almost a line-for-line reproduction of several other well-known copies, among which may be mentioned the statue from Cuiculum published in the *Gazette Archéologique*, 1879, fig. 32; the so-called Polymnia of the British Museum (*Ancient Marbles*, pt. IX, p. 15); the famous Dresden replica from Herculaneum; two portraits in the Athens Museum — one from Aegion (Körte, *Ath. Mitth.* 1878, p. 95, pl. vi); and several reproductions found at Olympia, one of which has an inscribed basis.¹ The last is the only statue of this type to which an artist's name is attached. The inscription is:

Διονύσιος | Ἀπολλωνίου | Ἀθηναῖος | ἐποίει.²

Of this Dionysius, Furtwängler says: "He belongs, probably, to the Attic family of artists which flourished in the Augustan Age, and in which the name Apollonius seems to have occurred not infrequently. He may well be the son of that Apollonius from whom we have the bronze bust of the Doryphorus in Naples, or possibly of him who sculptured the Belvedere Torso. Epigraphical and sculptural evidence alike prove that he belonged to early Imperial times."

¹ *Olympia, Ergebnisse*, Tafelband III, pl. lxiii, 2.

² The inscription was first published by Furtwängler, *Arch. Zeit.* 1879, p. 147, no. 293. [See also *Olympia, Ergebnisse*, V, p. 659, no. 646.]

This is the extent of our tangible evidence for dating statues of this class. No extant copy can definitely be referred to a period older than that of Augustus. Our replica, judged by the character of the work, falls in line with the others, and is to be set in the Imperial epoch.

The variety of draped female figures on the Attic grave-reliefs, the statues of the heroized dead on graves, the numerous honorary portraits of women, — the numbers of which were swelled by the demands of Roman fashion, — must have drained the sources of invention of the handicraftsmen who made them, and hence drawn into currency every available motive from the treasuries of the old Greek genius. Hardly any beauty of style could have remained hidden from the search of those copyists to whom the heirship of ancient art fell. Hettner, in his Catalogue of the Augusteum Collection has already made mention, under his discussion of the Herculeum replica, of a terra-cotta figurine from Thebes in the British Museum (*Elgin Marbles*, II, p. 122), which he says is decidedly earlier than the Augustan age, and which consequently carries this type of draped figure back into Greek times. Other examples might be brought forward, particularly the terra-cotta figurines published in the Odessa Museum (vol. I, no. viii, 1; vol. II, no. vii, 1). These exactly show the style of drapery of our figure, the only difference being that the right hand is at rest across the breast, not holding the mantle as in most of the statues. But in the *Collection Sabouroff*, vol. II, pl. cxi, we have, in a terra-cotta of the best Tanagra period, the action of our statue faithfully reproduced, except that the himation, after Hellenistic models, is shortened, while in the sculptured type, which goes back undoubtedly to pre-Hellenistic originals, the himation is longer, falling two-thirds the way to the ankle from the knee. But a still more striking analogy, because it is in marble and can be reasonably dated in the fourth century, is the figure of the central Muse in the middle one¹ of the Mantinean bas-reliefs. In this graceful figure

¹ Kavvadias, *Cat. no. 216*. [First published in *Bull. Corr. Hellén.* 1888, pls. i-iii.]

we have the long chiton contrasting, by its narrow folds, with the broad surfaces of the mantle. We have the mantle enveloping the left hand, which is slightly bent forward. We have the right hand crossed over the breast, and the wide corner of the himation hanging from it down over the other arm. The folds of drapery proceed, in the same fluent lines, from the middle of the left side. As in the case of the Odessa terracotta, however, the right hand lies at rest beneath the mantle, and does not grasp its hem to hold it in place, a motive which serves to enliven most of the portrait statues. The naturalness of this gesture, as well as the need for some apparent support for the heavy end of the garment, seems to indicate that the series of portrait figures has preserved the original motive, while the Mantinean figure is a variation from the canon. However we regard this point, we may at least admit that in the Mantinean basis we have another of those links which connect the later art with the earlier and which helped to transmit, even into Roman times, the outward forms of Greek sculpture which persisted long after the spirit which animated the originals was lost.

DIONYSUS

In the course of the excavations of 1899, back of the north apse which forms the enclosure of Pirene, and near a large foundation of good Greek masonry, at a depth of some twelve feet, a number of statues and fragments were disclosed. We will first mention two fragments of a group of statuary. The larger consists of a base with the lower part of a male figure clad in a robe which falls gracefully over the feet. The feet are protected by sandals bound over the top by straps which meet in a diamond shaped clasp next to the great toe. The left foot is set forward as though to indicate either an advancing motion or an attitude full of action. The second fragment, a base with the fore paws and hinder parts of an animal sitting on his haunches, was found to fit exactly upon the first, forming one group and

bringing the animal close under the right side of the man. The dimensions of the pieces are as follows: of the base with the male figure, in centimeters: height, 75; width, 72; depth, 70; height of base, 13; the fragment with the animal measures 68 by 53 centimeters.

Whether we have here to do with an Apollo or Dionysus must, I think, remain a matter of doubt. If with the former, then the animal may be thought of as a griffin, and the Apollo,



FIGURE 3. — DIONYSUS, FROM CORINTH: FRAGMENTS.

in the character of Musagetes, as standing in an attitude of divine inspiration with the lyre in his hand. Apollo accompanied by the griffin as a symbol of holy and mystic inspiration for song¹ is a familiar figure in art. He appears sometimes naked, as in the example in the Capitoline Museum at Rome, sometimes clad in a long robe like the type of the Musagetes pictured by Conze.²

¹ Cf. Stephani, *Compte Rendu*, 1864, pp. 57 ff.

² *Heroen und Göttergestalten*, Taf. lxi, 3.

If, however, we have to do here with a Dionysus we may restore the figure with a panther by his side and with either a lyre or thyrsus in his hand. That Dionysus in long robe was a popular subject for artistic treatment appears from the large number of statues and vase-paintings representing him that have survived from all periods of Greek art. A fine example from archaic times is reproduced in Gerhard, *Auserlesene Vasenbilder*, I, pl. 38. From late Greek times the Dionysus Mel-pomenus erected by Thrasyllus on his choragic monument points to the continued popularity of the clothed type of the god.

Indeed, I am inclined to regard the fragment from Corinth as part of some such representation of Dionysus, especially as that deity seems to have gained considerable respect among the people of the Roman town. Almost the first objects that caught Pausanias's eye on entering the market-place were two zoana of this god. To these revered images as prototypes our statue cannot of course be referred; but that other, later representations of Dionysus were familiar to the Corinthians we may fairly assume in view of the reproductions appearing upon coins of Roman date. Imhoof-Blumer and Gardner publish five styles of coins bearing effigies of Dionysus in their 'Numismatic Commentary on Pausanias,' pl. iv, Nos. 77-81: No. 77 shows the god in long chiton standing with thyrsus in hand and by his side a panther. In other examples the panther is seated; in this one he advances with one paw raised. Still another type has the panther, this time seated, and the god is clad only from the hips in an ample robe. Now, the drapery on the left side of our marble fragment stands out in vertical folds at a considerable distance from the body, in such a way as to lead one to think that it has fallen from a height, probably from an extended or raised arm. Hence we conclude that the figure was fully clad and that the left hand was stretched forward in the act of grasping some object like a thyrsus. It must be admitted the analogy between the piece of statuary and the representation on the coin is very close, as the only

difference lies in the position of the animal which accompanies the god. That both were inspired by one original can hardly be doubted. The treatment of the deep folds of drapery is bold and free, the feet are well wrought and polished; only the fore paws of the panther are somewhat hastily done. The work is Roman.

COLOSSAL FEMALE FIGURE

In the same place with the preceding statue was found a colossal female figure, well preserved except the left hand, the right arm from above the elbow, and the head, which were broken off (PLATE XV). The head and neck were of a separate piece and were set in a deep socket made to receive them. The figure is clad in a sleeved chiton, a long tunic hanging from either shoulder, and a large mantle, which, thrown over the left shoulder, is drawn around the body under the right arm, sweeps across the whole front of the person and finds support in the extended left hand. This great robe extends thus from the breast nearly to the feet, and leaves only a little of the tunic visible at the ankles. No contrast of texture is attempted between himation and tunic. The sail-like expanse of cloth is unrelieved by any refinement of modelling or by any delicate indication of the line of the limbs underneath, which it conceals, and the heavy folds falling from the left hand are quite hard and conventional. The undergarment is so stiff as to appear to be starched.

The question of the naming of the figure as well as of the tracing of the style brings us to several analogous statues of the better period. The general lines remind one of two well-known female portraiture: first, of Artemisia from the Mausoleum, and, second, of the Themis of Rhamnus, the one from the period of the full bloom of Greek art, the other from the times when it was already settling into its decline. Another statue very similar to ours is in the Naples Museum, and is pictured by Clarac, III, pl. 429, No. 771. Here are found the long tunic, the mantle drawn over the left shoulder and across the

body, and the heavy lines of drapery. Although the Naples statue has been restored as Ceres by the addition of a wisp of wheat in the left hand, there is no monumental evidence whatever for thinking of it or of our own statue as anything but the portrait of some Roman matron. It strikes one as singular to find appearing again on so huge a scale, for the statue is two metres in height, a type we are accustomed to admire in miniature, as it were. I refer to the graceful and delicate figure on the sarcophagus of the "Mourning Women" at Constantinople,—the fourth figure on the north face. Here the position of the feet, the folds of the tunic appearing under the long robe, the robe itself covering the body from breast to ankle, the sleeves of the chiton, the approximate position of the arms and hands, reproduce even in details the motives that persisted unchanged until they were adopted by some clumsy Roman workman, and were set up in exaggerated proportions in Corinth.

That the work is from Roman hands hardly admits of a doubt. The colossal scale in which it is conceived is calculated to emphasize the faults of workmanship. The sleeves of the chiton are blurred by hasty and bungling cutting; the rough edging on the side of the himation is merely coarsely indicated, serving rather to deaden the effect than to relieve the monotony of the baggy mass of drapery. The feet are rather better rendered than other parts of the body; they are bound in sandals like those on the Dionysus, with straps which are common, so far as I have observed, only to Roman copies. Although the marble is not rough cut, as in the poorest Roman work, and is not disfigured by the use of the borer, there is a finished mediocrity about the masses of drapery and an unleavened heaviness and lifelessness about the whole which betokens late work.

A SECOND COLOSSAL FEMALE FIGURE

It is with pleasure that we turn to another and nobler specimen of the sculptor's art, embodying an ideal more fitted to be treated on a large scale than the last. This fine statue (PLATE

XVI) was found without head or lower arms, and therefore our means of determining its identity are reduced to general considerations of style and drapery. The drapery consists of a linen chiton, gathered on both shoulders and sewed together on the upper arms to form sleeves; it falls to the feet, the top of which it touches but does not cover. That which gives character to the whole figure is, however, the himation of the diplax, or diploidion form, which is thrown doubled about the body, is caught at the waist by a girdle, and falls in massive folds at the side. One edge of the diploidion runs across the body just above the knees; the lower edge, midway between knee and ankle. The folds which on the breast run from right to left change their direction at the girdle, and fall massively straight down. Over the front of the body the heavy woollen material does not gather itself into plaits or folds, but presents a plain, smooth surface, like an apron. The horizontal edges of the diploidion are finished in a hem; the vertical edges show a rough finish, left by the marks of the loom. The feet are supported on sandals bound by a strap, little of which, however, appears. The girdle is a cord wound twice round the body and knotted somewhat jauntily in front. The following are the dimensions, in metres, of the statue, which is headless: total height, 2.025; height of base, 0.095; greatest breadth, 0.88; neck to girdle, 0.40; girdle to first hem of diplax, 0.60; hem to hem of diplax, 0.52; first hem to bottom of chiton, 0.825; greatest thickness of statue, 0.44. The arms were dowelled on; the left arm was bent at right angles to the body at the elbow, the right arm was either dropped at the side or slightly bent forward.

If we proceed from the examination of details to regard the general effect of the statue as a whole, we are impressed, first, by its extremely vigorous and uncompromising appearance. A tall stalwart form is set off by the most simple and unelaborated garments. There is no straining after grace or voluptuousness. Even the majestic breadth of treatment which we usually associate with the diploidion is shunned. One needs only to recall the Athenas of the "Farnese,"

“Hope,” and “Albani” types to have the contrast forced upon him between the massive dignity of their drapery and the close-fitting simplicity of our statue. The wide difference in effect between the ordinary treatment of the diploidion and that which occurs here is secured mainly by the use of the girdle. The girt chiton is, indeed, a constantly recurring motive; the girt diploidion I have found only rarely, and in no case in a piece of sculpture comparable to this in size or workmanship. Let it not be concluded, however, that any of the severity upon which we have insisted as forming the characteristic feature of this statue is due to the stiff handicraft of early art, nor yet again to the wilful imitation of the archaic style. Throughout, the artist who devised the type showed the most perfect artistic control of his material, unconstrained either by lack of skill or by reminiscences of an earlier and conventional mode. On the contrary, the sculptor has sought, even in minute details, to lend that variety and beauty to his work which arise from skilfully contrived contrasts conscientiously wrought out. Even so slight a detail as that already mentioned of the finishing of the seam is not without its appropriateness; for the straight smooth bottoms of the two parallel edges of the himation, needing a definite finish, receive a narrow hem which accentuates the firm and durable quality of the material. But on the side, where the drapery falls more massively, the rough edge bearing the impression of the loom is left to add to the effect of voluminousness and freedom. The folding of the outer garment along the right side necessitates heavy double pleats, which run in zigzags, after the usual fashion; these are, in turn, set off by long vertical folds dropping from the waist, while the abundance of material thus gathered on the side is sharply contrasted with the flat, rectangular surface on the front, which is itself cut halfway by the upper hem of the mantle. The monotony of a third plane surface over the breast is avoided by the right-to-left slant of the folds over that part of the body, a motive justified by the suspension of the whole gar-

ment from the right shoulder. A further relief for the eye is afforded by the variety of texture which is indicated on the marble surface. The narrow crinkled folds in the linen chiton set off the broad heavy surfaces of the himation. The feet, the only flesh parts that are now preserved, may be taken as an indication of the treatment of the flesh generally. They are most carefully chiselled, and have received a high polish.

The determination of the name of this statue is rendered difficult by the absence of the head, and of the arms which may have held an attribute. The difficulty is further increased by the rarity of similarly draped figures and by the total absence of replicas. Too stalwart and unbending for a muse, it is still too majestic for a portrait statue of the ordinary type. Though the vigor of pose reminds of the warrior aspect of Athena, the absence of attribute, especially of the aegis, excludes the possibility of regarding it as a representation of that goddess. Nor do any of the common types of divinities urge themselves upon our attention with convincing force. Two analogies, only, present themselves. First, in the Villa Albani are three figures restored as Canephorae, or priestesses of Ceres. They are clad in the diplax girt about the waist, and with bands crossing on the breast, where these are secured by a brooch in shape of a head of Acratus. Clarac (III, p. 142, no. 807 A) suggests that this Bacchic genius is a sufficiently appropriate symbol for a priestess of Ceres, in view of the association of the cults of Demeter and Dionysus. The arms and baskets of these figures are all modern.

The second analogous statue is one found at Eleusis and pictured by Furtwängler.¹ Furtwängler regards this as an early archaistic work from the fourth century B.C., as is testified by the inscription in good style, [Ἀθην]αίων ὁ δῆμος τοῖν θεοῖν. Here we find a mixture of the archaistic and of the freer fourth century styles. The diploidion hangs rather loosely over the lower part of the body, and the long chiton

¹ *Über Statuencopien im Alterthum*, p. 13.

is of decidedly an archaic pattern. But the girdle, high up under the breast, the small folds caught under it, and the change in direction in which they run, remind us of later work and bear an especially strong resemblance to our statue. The figure from Eleusis held something in both hands before it, which was further supported by a brace running to the middle of the body. The object in the hands was probably some chest or basin connected with the Demeter cult. The figure from Corinth, on the contrary, could not have employed both hands to support an object in front of it; and if either hand held an attribute, it was of sufficiently light weight to dispense with a support. Further, the position of the arms at the side will not allow us to restore her as a canephore. On the contrary, I am inclined to regard this as an heroic fifth century type which a later artist has reproduced with care. Although the photograph seems to indicate good Greek work, on the stone itself there are notable traces of haste or carelessness. Such are, above all, the sleeves. Here, where an earlier artist would have exercised his greatest skill to represent the fineness and delicacy of the soft linen, we have bungling and scratchy work. The masses of drapery between the elbows and body are somewhat too cumbersome for a really pleasing effect. Some of the folds about the girdle are executed with the border in the Roman manner. On the other hand, the thoughtfully conceived character, upon which the artistic effect of the whole depends, is far from being the product of the Roman spirit which, content to multiply by copies its legacy of Greek art, seldom ventured to invent new motives. In fact, if we are right in referring the two other figures to a sculpturesque type already fixed in the time of Praxiteles, it may be stated that most of the forms of antique sculpture, except those in distinctly Roman national style, were definitely crystallized by the end of the fourth century.

One discrepancy of styles in this figure remains to be noticed. It has already been observed that the hang of the garment over

the breast, the small folds about the girdle, and the change in the direction of the lines of drapery remind us of fourth century ideals. But the short, close-fitting chiton, barely covering the feet and nowhere touching the ground, is characteristic of the work of the middle of the fifth century. One may compare the so-called Lemnian Athena in Dresden, and particularly an Athena on a vase in *Élite Céramique* (I, 80). We find the short drapery, however, persisting until later in the fifth century, as in the figure of Core in the familiar Eleusinian relief. It is probable, therefore, that these two ways of treating different garments on the same statue may have been combined and that we have such a combination on this figure from Corinth, the original of which may be referred therefore to the end of the fifth or the beginning of the fourth century.

APHRODITE

Of quite a different character from the others is a torso of Aphrodite found in the course of the excavations. This torso, which is broken off at the thighs and of which the head is lacking, measures 86 cm. in height, 44 cm. in the width of the shoulders, and 21 cm. from breast to breast. The arms are broken off at the shoulder. The body is bent slightly forward from the waist and shows an inclination to the left side; that is to say, the left shoulder is somewhat lower and more advanced than the right. Along the right side the marble discloses a flaw which must have marred the beauty of the piece considerably. On either shoulder fall two thin locks of hair. The workmanship is careful and the surface has received a fine finish, but is devoid of warmth and feeling. The modelling of the muscles of the back, however, is especially good and firm, but the large bony left hip gives an unnaturally harsh appearance to the body.

A restoration of this statue on the lines indicated by the parts of limbs remaining gives us a figure which resembles in general the type of the Capitoline Venus. It is seen that the

left arm must have extended downward near to or across the front of the body, while the right may easily be conceived of as bent at the elbow and held before the breast at the dictates of modesty. Judging by a slight projection at the junction of the left leg with the body, it would appear that that limb was a little advanced or raised. The foot may have rested

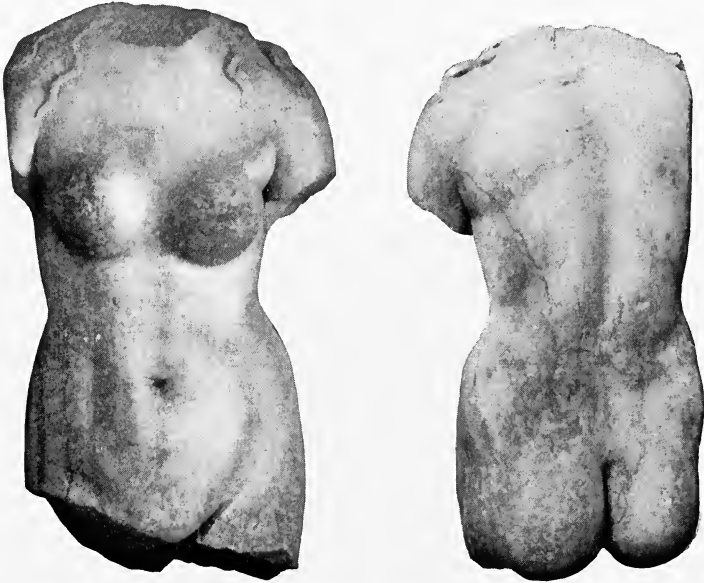


FIGURE 4. — TORSO OF APHRODITE, FROM CORINTH.

on some object, as a dolphin — an appropriate adjunct to the Aphrodite Anadyomene. The Corinthian copy is therefore a little varied from the general type of the Capitoline Venus, to which, however, it is more nearly allied than to other types.

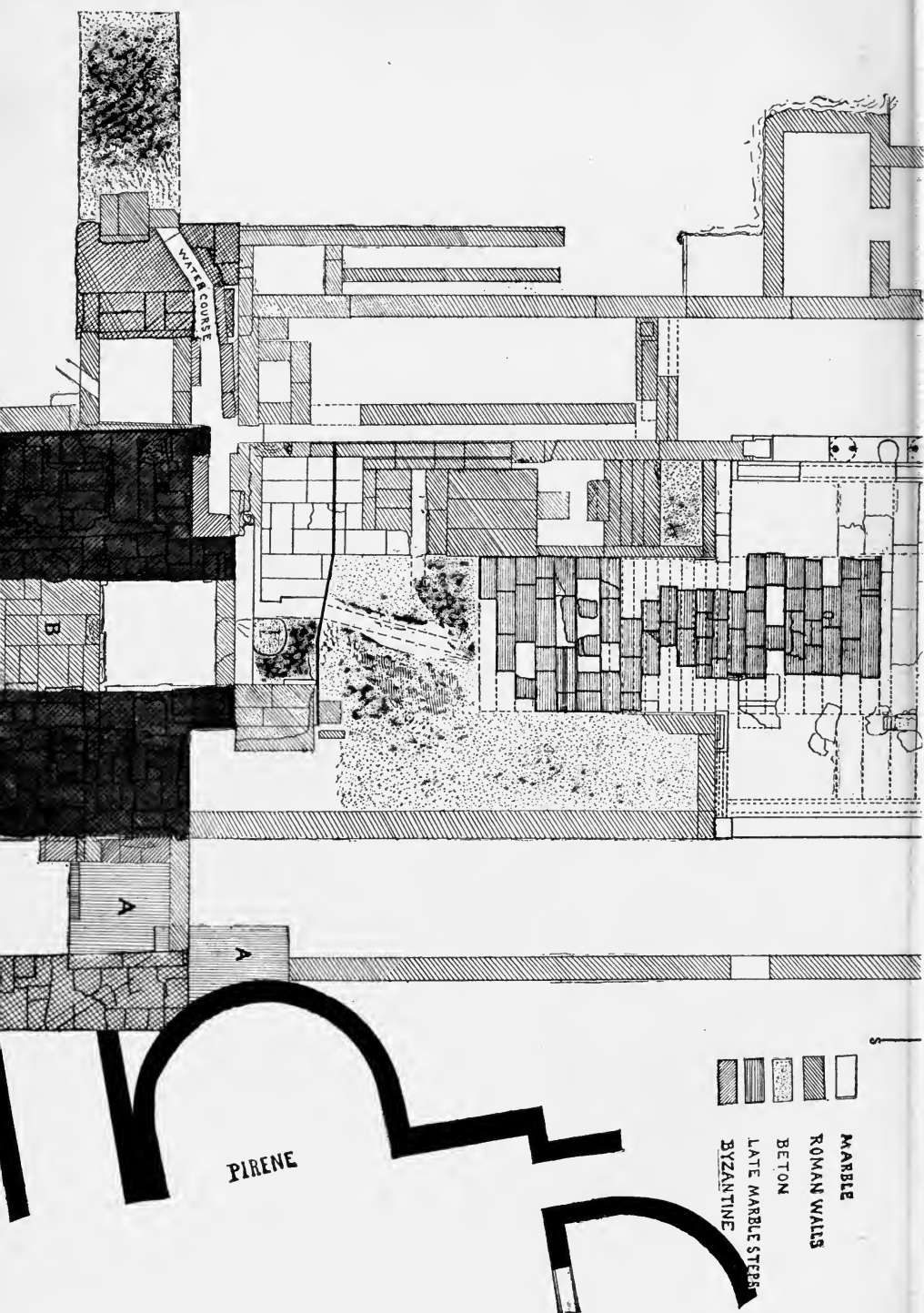
LATE MALE PORTRAIT HEAD

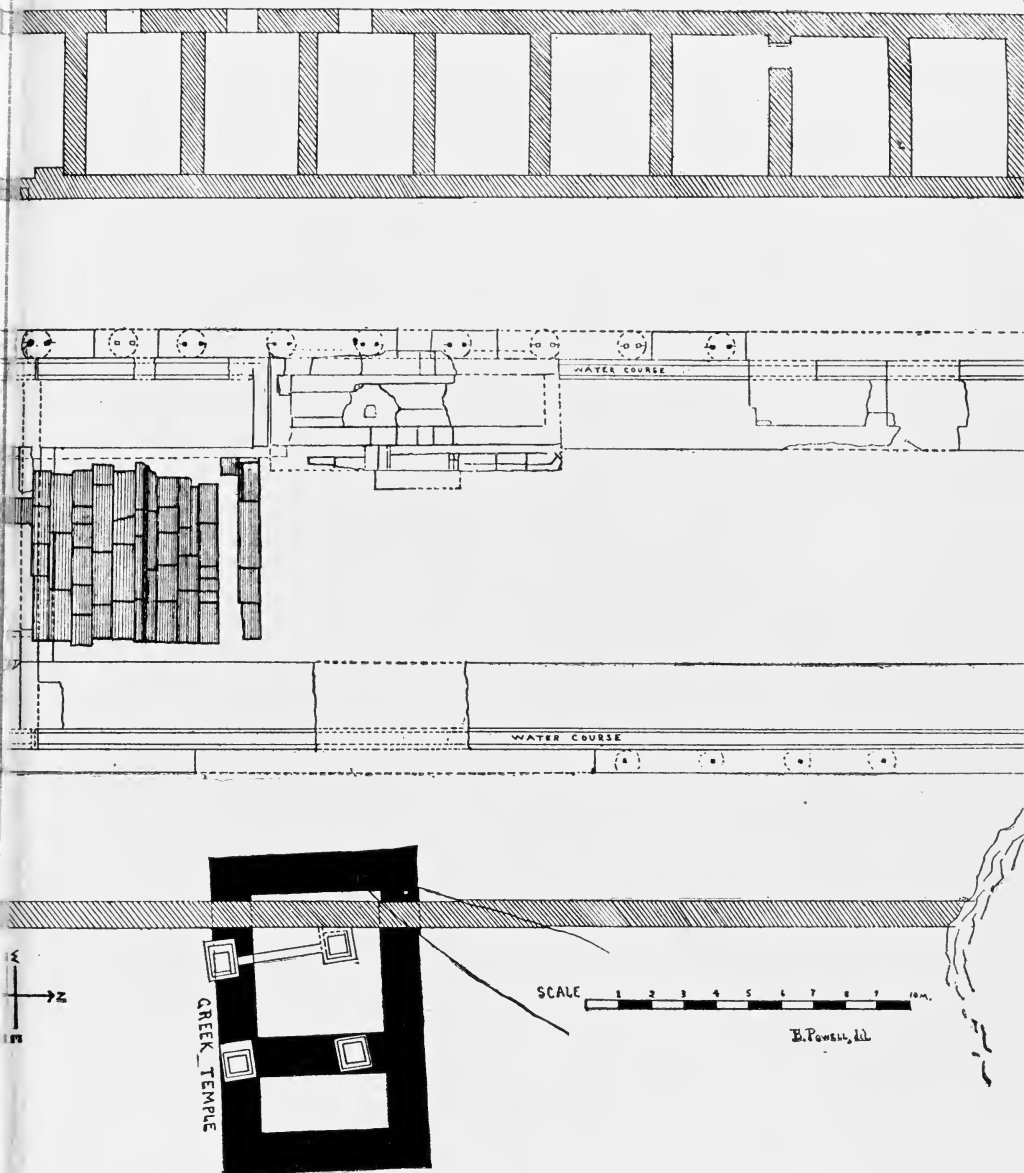
The male portrait which is figured with the lions' heads (Fig. 1, p. 423) was found in 1899, in a much mutilated condition. It represents a man in the prime of life, as the wrinkles in the brow betoken high physical development rather than

age. The mouth and nose are largely broken away. The hair lies close to the head, and is only roughly wrought. The beard is indicated by short, quick strokes of the chisel. This workmanship refers the head to the third century of our era. Compare a Roman portrait head in the Berlin Museum (*Catalogue*, no. 428).

JAMES TUCKER, JR.

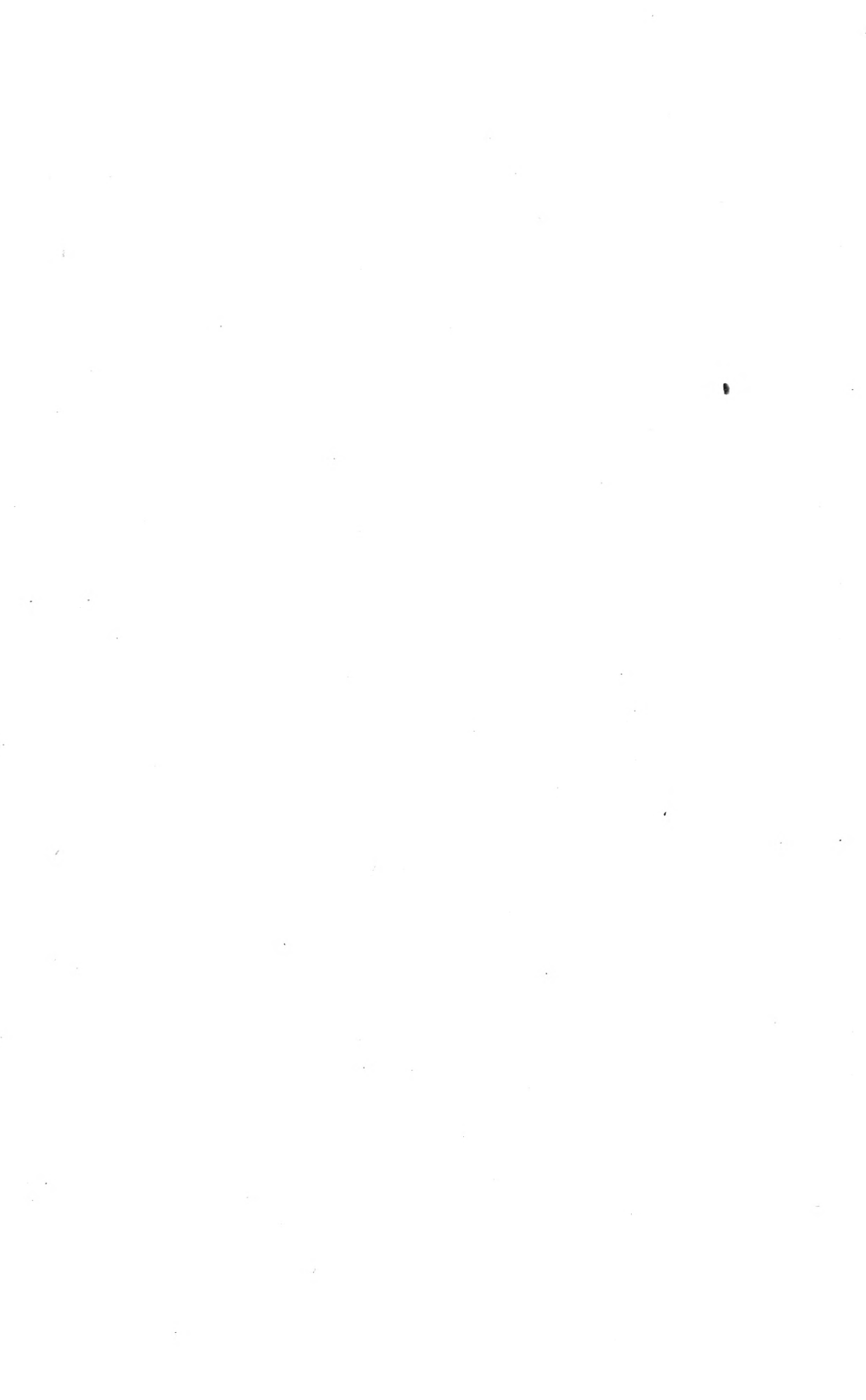
ATHENS,
February, 1900.





YLAEA AT CORINTH: GROUND-PLAN







THE LECHAEUM ROAD AT CORINTH: VIEW LOOKING SOUTH

American School
of Classical Studies
at Athens

THE LECHAEUM ROAD AND THE PROPYLAEA
AT CORINTH

[PLATES XVII, XVIII]

IN the year 1896, when the American School of Classical Studies at Athens was digging its first trial trenches at Corinth, a strip of white limestone roadway, running north and south, was discovered about 5 m. below the surface, in Trench No. III, between the temple hill and the next hill to the east. In subsequent years up to 1901, considerable strips of roadway, as well as some steps leading up to the foundations of a Roman arch standing on the edge of the Agora, were uncovered. Traces of this roadway were also discovered in several trial trenches to the north, the farthest, half a kilometer away, showing that this road, if continued, would run straight to the ancient harbor of Lechaeum. This, together with the fact that the fountain of Pirene was discovered close to the northeast corner of the arch, makes indisputable the identification of this roadway with that mentioned by Pausanias as "the straight road to Lechaeum."¹

This roadway, which, at least in the excavations, runs due north from the Propylaea or arch, is composed of a central way with raised sidewalks on either side (see PLATE XVIII). Where the Byzantine flight of steps (to be mentioned later) commences, the central way is 7.10 m. in width; whereas, at the

¹ Pausanias, II, 3, 2: *ὀλίγον δὲ ἀπωτέρω τῶν προπυλαίων ἐσιοῦσιν ἐν δεξιᾷ ἐστὶν Ἑρακλῆς χαλκοῦς· μετὰ δὲ αὐτὸν ἔσοδός ἐστι τῆς Πειρήνης ἐς τὸ ὕδωρ, . . . αὐθις δ' ἰοῦσιν ἐπὶ Λεχαιῶν τὴν εὐθείαν χαλκοῦς καθήμενός ἐστι Ἑρμῆς. παρέστηκε δὲ οἱ κρύος.*

northern end of the excavations 24 m. away, it has increased to 7.50 m. in width. Whether the breadth continues increasing, it is at present impossible to say, but it could scarcely continue indefinitely. The sidewalks are, like the central way, composed of large slabs of pink and white limestone, averaging 0.15 m. in thickness. They stand 0.295 m. above the road and are both 2.95 m. in width, while 0.20 m. from the outer edge of each are sunken curved gutters, 0.38 m. wide by 0.11 m. deep, all the slabs being laid in mortar upon a substantial foundation of *poros*.¹

On either side the splendor of this roadway was enhanced by a Corinthian colonnade. Of these colonnades that on the west is rather the better preserved, although even here there now only remains the stylobate, on which the base of the anta at the southern extremity was the only thing found in position. This stylobate is composed of white limestone blocks 0.81 m. wide by 0.30 m. high, and raised 0.045 m. above the sidewalk; it likewise gently inclines up the slope, rising 0.36 m. in 10 m.

Although there is but one base *in situ*, the positions of the others are easily determined by the pairs of dowel holes, 0.47 m. apart, which recur along the stylobate at a distance of 2.65 m. from centre to centre of the bases. Fortunately, some six bases with corresponding dowel holes have been found. They are of rather inferior marble, and, while 0.335 m. high, have a lower diameter of 0.78 m. as compared with that of 0.63 m. above. Their ornamentation is simple, consisting of a plain surface below and two tori with a scotia between them above. What the exact dimensions of the columns were is not certain, except that their lower diameter was 0.53 m. and their upper 0.46 m. They were, however, unfluted and entirely plain except for a slight enlargement at the top, as can be seen from the many fragments which have been discovered near at hand. Several Corinthian capitals of the same lower diameter have been likewise discovered, but it is impossible to decide as to either cornice or architrave, as fragments of many styles abound.

¹ *Poros* is here used for the soft brown limestone common to the district.

As may be seen from the Plan¹ (PLATE XVII), the back wall of this colonnade was formed by the front wall of a series of chambers. The exact purpose of these chambers is unknown, but they were probably stores which opened out into the covered passage-way (5.50 m. in width). That they date from the Roman period seems evident from the use of dovetail clamps and from their general construction. Their arched roofs (traces of which remain) probably supported the upper end of a sloping roof over the colonnade, and formed one of the several terraces around the hill where stands the temple of Apollo.

The stylobate of the colonnade on the east is even less well preserved than that on the west, possibly because it was built of light-colored conglomerate, instead of white limestone. Its dimensions correspond with those on the west, but instead of sloping upward with the roadway, this stylobate is practically level, and thus toward the north rises above the sidewalk, so that the *poros* foundation underneath is allowed to appear. The dowel holes are at the same intervals; but, instead of being in pairs, we have but one hole for each base. The depth of the porch here is the same as that on the west, but the back wall² seems less well constructed, and as for the most part only the lower courses remain, but one doorway near the southern end can be located.

The sidewalk on the west is interrupted some 7 m. from its southern end by a large base, probably intended for statues, which was built into the sidewalk and projected into the roadway. Unfortunately, it is badly broken, but its general form may still be recognized. It was raised somewhat above the sidewalk, but being level, instead of inclining with the sidewalk, it rose only 0.22 m. at the south as compared with 0.54 m. at the north; it is 8.85 m. in length. The south-

¹ Drawn by Mr. Benjamin Powell of the American School.

² This wall passes directly over the foundations of a small Greek temple shown on the plan, and thus shows that the latter was never rebuilt after the destruction of Corinth by Mummius in 146 B.C.

ern side seems to have risen abruptly from the sidewalk; the northern end is too badly broken to allow us to judge what was its original shape. From what remains it is, however, safe to say that in the rear the base protruded 0.22 m. over the stylobate, except where it was cut away to make room for the four column bases directly behind it. The front of the base projects 0.65 m. into the roadway, and in the centre of this is another projection of 0.53 m., which is 2.64 m. long. What stood upon this base is of course uncertain. Pausanias, upon leaving Pirene, mentions a statue of Hermes and the ram, which must have stood in the roadway, as the colonnades on either hand would have concealed anything beyond. Possibly, then, this statue stood here, and the columns behind it may



FIGURE 1. — ROMAN COINS OF CORINTH.

have supplied the idea of the canopy depicted on the bronze coins of the Roman period (Fig. 1). True, the dimensions of our base would be more appropriate for a larger group; but, on the other hand, Pausanias

would scarcely have left unnoticed so large and of necessity so conspicuous a monument as that on this base.

To the south of the base the gutter, which had at this point been turned at right angles, so as to discharge into the roadway, again resumes its course. The roadway then continues on for 7.30 m., to where the rather sharp incline of the ground necessitated a stairway. This stairway was constructed originally in Roman times; but later, in the Byzantine period, it became worn and broken, and the inhabitants of Corinth built another over it.

This Byzantine stairway is really scarcely more than an inclined roadway. It consisted of thirty-eight slightly inclined steps, which were raised only a few centimetres the one above the other, and which were constructed of various sized pieces of marble and limestone, ranging from paving stones to split

columns. Just when these steps were constructed is uncertain, but as some of the steps are made of blocks bearing inscriptions from the end of the Roman occupation, their date must be very late.

From beneath the sides of this stairway (which averaged less than 6.50 m. in width), the remains of the Roman stairway still project. This latter was very different in scheme and construction, as it consisted of two flights of steps with a platform between. The first step rises from the surface of the roadway about 6.62 m. to the south of the base already described, whereas the later or Byzantine flight extends almost to the base.

This step, and likewise the two succeeding ones, were about 0.225 m. high and 0.42 m. deep; but whereas the first extended only across the roadway, the next two reached from gutter to gutter across the sidewalks. No trace of a fourth step remains; but as the requisite height remaining to be attained to the platform above is 0.15 m. and the pavement of the platform above ends 0.84 m. behind the cutting in the top of the third step, we may assume that these were its dimensions.

The higher level to which these steps lead was a species of platform about 7.10 m. long, in which, although there were still gutters on the sides, there was no distinction between sidewalks and central roadway. The pavement consisted of large marble slabs, 0.08 m. in thickness, which are now badly broken. Even the small part of the pavement that remains shows signs of mending, and in one case an inscribed slab, upon which Publius Memmius (probably the *duumvir* of Nero's time) is mentioned, is used for this purpose. The gutter likewise has almost entirely disappeared, for while none at all remains on the east, that on the west is badly broken.¹

The colonnade continues along either side of this platform.

¹ It is of interest to note that opposite the doorway of the last shop the gutter is greatly worn, denoting the passage of many feet across to a doorway in the back wall of the east colonnade, which undoubtedly marked the western entrance to Pirene.

but here points of variance again appear; for while that on the west remains at its original level and its stylobate is thus considerably below the gutter of the platform, that on the east rises with the second step of the stairway, and then continues along flush with the top of the gutter. It is now, however, so badly disintegrated that no dowel holes appear, and hence we must assume that it was in this particular similar to the one on the west, which is much better preserved.

The western colonnade, and presumably the eastern one also, ended in an anta, which projected 1.80 m. beyond the front of the western of the two podia or buttresses which formed the two outer corners of the uppermost platform, and between which the stairway rose to this next level. This anta, the base of which was found *in situ*, was of the same type as the columns. It was of white limestone, as were 0.30 m. of the wall behind it, but the remainder was of *poros*.

The podia from which these antae projected were of almost uniform dimensions: the western 4.48 m., the eastern 4.45 m. in width. We thus have left between them a passageway of 5.18 m. through which the Roman as well as the later Byzantine steps ascended. They were composed of an outer *poros* wall with a filling of beton, and their fronts, revetted with marble, probably rose about 2.25 m. above the level of the second platform. Of this marble facing little now remains; of the remnants an idea may, however, be gained from the accompanying photograph of the east podium (Fig. 2).

The lower of the three blocks projects some distance inside the face of the podium, and we may therefore assume that it ran across the opening to the other podium, and thus formed one of the steps of the stairway. This block, however, is 0.17 m. above the pavement of the second platform and 0.39 m. to the south of it; wherefore we may likewise assume that the cutting on its face, 0.225 m. above the pavement, was intended for the back of another block which would have made the first step of the stairway, as well as the lowest ornament of the podium. We thus have the first two steps of the stairway,

each 0.225 m. in height and, to judge from the second, about 0.43 m. in depth. The weathering on the inner facing of the stairway, which consists of thin marble slabs, also seems to indicate the height of the third step as 0.225 m., but beyond this we have no other traces of the stairs.

Of the ornamentation of the podium we have other remains, for above the second step, which, like the first, reached across



FIGURE 2. — LECHAEUM ROAD.

Remains of eastern podium, showing fragments of ornamentation on the front and the marble facing along the stairs.

from one anta to the other, we have two other blocks, one square, the other with moulding, and respectively 0.225 m. and 0.16 m. high. These blocks, however, did not go across the opening, but merely ran along the front of the podia, probably turning the inner corner, as a cutting there appears into which a piece of moulding similar to that on the front must have been fixed, extending back to the third step. Above the

block with the moulding there was nothing except slabs of marble 0.08 m. in thickness, which correspond to those with which the walls flanking the stairway were covered. What the ornament above them was, it is impossible to say, as no traces now remain. The probable effect of the podia, however, was that of two statue bases on a large scale, and the one on the right may have supported the bronze Heracles which Pausanias mentions as having stood near the Propylaea.¹

As to the exact number of steps, we shall never be absolutely certain, for, with the exception of the three already mentioned, the Byzantine steps cover all traces. To judge from the average height (0.225) of these three, and from the height to the upper platform to be attained by the flight (approximately 2.25 m.), it seems safe to say that this flight had ten steps, the upper of which was flush with the platform above.

When the earth had been removed from the western podium, it was found that portions of some steps of *poros* were protruding from the beton core, and on the removal of the beton from between the walls of this podium, a flight of five steps was uncovered (see Fig. 3). Likewise on the east a step corresponding to the first of these five was discovered protruding from under the east podium into the central opening. This first step, then, evidently originally ran from side to side, and we may safely assume this to have been the case with the others, although at present they do not do so. The dimensions of the steps are, however, considerably greater than those of the others already described; for, beginning 1.90 m. behind the face of the podium and 0.465 m. above the pavement, it is 0.535 m. high and 0.55 m. deep, while the others are all 0.40 m. deep and 0.255 m. high. To have gone deeper into the beton in the hope of discovering other steps would have been to destroy what remained of the podium, and naturally this was not done.

¹ Pausanias, II, 3, 2. It seems unnecessary to emend the text of Pausanias here from *ἐσιούσιν* to *ἐξιούσιν*; he probably anticipates the *ἔσοδος* of Pirene, and, meaning "on the right as one turns in" to visit Pirene, does not refer to the entrance to the Propylaea which he has just quitted.

In consequence it is impossible to say whether there were ever more steps below those now exposed; that there was, however, one more at the top is certain from the cutting in the upper step now *in situ*. This flight of steps led up to the same platform of *poros* to which the other Roman steps led; but whereas these latter were evidently of later construction, the steps of *poros*, although resting so far as can be seen on nothing but



FIGURE 3.—LECHAEUM ROAD.

Walls to the west of the platform; also remains of three steps which led to the inclined way up to them. On the left, *poros* step leading to platform.

earth, are quite as surely of the same period as the platform. We thus have two Roman flights of steps: the earlier of *poros*, 11.80 m. in width, while built over this we find another stairway, constructed of marble, rising between the podia, which are likewise built directly over the earlier system. That the *poros* steps are Roman is certain, and consequently it seems probable that they were constructed immediately upon the rebuilding of

the city by Julius Caesar; whereas the marble steps and lower platform, together, perhaps, with the marble colonnades and white limestone roadway (for it seems inconsistent to think of the latter two leading up to a flight of *poros* steps), were built at some date not far removed, but still sufficiently distant to allow the earlier system to become well worn.

The platform to which these stairs ascended was of necessity raised considerably above the level of the valley, especially on the east; something more than an earth filling was therefore necessary between the walls.

On the eastern side of this platform the upper surface, although badly disintegrated, is composed entirely of beton, and thus the substructure is entirely hidden from view. On the west, however, the platform is better preserved, and consists of slabs of *poros* resting on cross walls, between which earth was probably packed. This platform dates from the period of the steps of *poros*. When, however, the marble steps were constructed, the platform was changed and covered with slabs of marble, 0.065 m. thick, and laid carefully in mortar. At the west the marble slabs rested in a cutting made for them in the top of the retaining wall. This wall on the west is flush with the top of the slabs, and that they extended to the west of it seems impossible, primarily because there are no suitable foundations, and, in the second place, because no such extension would have been possible on the east, since the wall there rises 0.41 m. above the pavement. We may therefore say with certainty that the platform never exceeded its present width of 13.30 m., while from the end of the podia to the upper, *i.e.* southern, platform was approximately 15.50 m.

The purpose of the walls directly to the west of the platform is not certain, but they seem to have been constructed with great care and probably were approached by an inclined way, access to which was given by a flight of three steps the remains of which end the covered passage-way just to the west of the western podium (cf. PLATE XVII). Whether this was covered by the roof of a colonnade along the edge of the platform can-

not be said; it is possible, but scarcely probable, as no trace of it appears.

The surface of the platform itself was probably unbroken except for a *poros* base, 3.63 m. long by 2.25 m. wide, which now rises 0.41 m. above the level of the pavement in the north-eastern portion of the platform. Whether this base was intended to support statues or not it is impossible to say, as no marks appear on any part of its surface. There is, however, a faint possibility that it may have been a fountain, for, carefully imbedded in a cutting which ran from the western wall to this base (indicated by heavy dark line on Plan), a lead pipe was discovered, which had been at some time broken off near the centre of the base. What purpose this pipe served, unless it was connected with a fountain on the base, I cannot say, for there are no indications in the platform itself that it continued farther, and there is no opening by which it could have passed through the wall to the east.

Whatever the purpose of this base, it abutted directly against the Propylaea, and immediately west of it there was the passage-way which led from the upper platform through the Propylaea into the Agora. The Propylaea in reality consisted of a Roman arch which is depicted on six coins of the period, ranging from the time of Augustus to that of Marcus Aurelius.¹ As may be seen from the reproduction of the four available coins, it is difficult to gain any definite idea of the structure from them, as the representations differ not only in detail, but even in the number of entrances (see Fig. 4).

Of the coins here reproduced, those of Domitian and Hadrian must be the more accurate, as the foundations themselves seem those of an arch with one entrance, rather than those of an arch with three. As may be seen from the Plan, the width of the two buttresses combined with the width of the doorway corresponds almost exactly with the width of the platform in front, so that to presume three entrances would necessitate an

¹ Imhoof-Blumer and Gardner, 'Numismatic Commentary on Pausanias,' *J.H.S.* vol. VI, 7.

extension of the pavement to both the east and west, which was clearly impossible on the east, and highly improbable on the west. To have a gateway double the width of the roadway seems, furthermore, as inconsistent as it would have been useless, for in all cases of arches with three openings, the central opening was intended for animals and vehicles, a division here made unnecessary by the nature of the approach, which would have allowed passage only to those on foot. Such being the case it seems almost superfluous to add that, of the eighteen other arches constructed before or during the reign of Augustus, from which period this arch (from its appearance on his coins) must date, only one, namely the arch at Fano,¹ is con-



FIGURE 4.—ROMAN IMPERIAL COINS, REPRESENTING THE PROPYLAEA AT CORINTH.

structed with three openings, and of these three the two smaller were merely passages cut through the wall into which that arch was built. In addition to this the relative width of the piers and the opening corresponds to the proportions of the arches on the coins of Domitian and Hadrian, while this is not at all the case as regards the proportions of those displayed on the other two.

The nature of the ground and of the surroundings have, however, necessitated such a structure, that at first sight the foundations might be taken for those of an arch with one large central opening and two side openings of almost equal width. As has been mentioned before, the roadway leads up through

¹ Baumeister, *Denkmäler des Klassischen Altertums*, vol. III, p. 1877.

a valley, at the head of which lay the Agora. The roadway, however, is not in the centre of this valley, but on its western slope, so that, when the conglomerate stratum which forms the upper end of the valley is reached, the road has not only the steep incline of the side hill, but also the perpendicular ascent of the terrace to overcome. This perpendicular rise had necessitated the steps and, joined together with the incline of the hill, it rendered necessary the construction of a large number of retaining walls, which, while forming a boundary to the Agora, at the same time supplied a level foundation for the arch, just north of the conglomerate stratum.

The extent of the retaining walls with which it is necessary to deal here is not great, for on the east they are terminated by the abrupt descent into Pirene, while on the west they are combined in the foundations of a portico, which here ran along the northern edge of the Agora. To the east of the piers of the arch and at a considerably lower level, appears a carefully laid wall (marked A on the Plan, PLATE XVII), which extended from the western end of the extension of the façade of Pirene at least as far as the edge of the eastern pier, and probably extended beyond under the western pier also (through B). This wall then made a level foundation for the arch, while it at the same time served as the substructure for other more lightly built retaining walls to be discussed later.

The piers of the arch, roughly 6.75 m. by 5.10 m. each, rose 2.35 m. to the south of the end of the pavement of the upper platform and were separated by an opening 3.65 m. in width. On their northern faces they have each projections 1.45 m. by 1.45 m. on either side of the doorway, which probably served as supports for the columns with which it was customary to decorate arches of this type. It is possible that there were likewise corresponding projections at the outer ends of these faces, although on the east the raised *poros* wall flanking the pavement may have served this purpose; while on the west it is impossible to say whether there is a projection or whether it is a continuation of the wall on this side, so badly has it been hacked

by the later inhabitants when constructing a drain. The inner projections, now *in situ*, are connected by a cross wall, which acted at the same time as a retaining wall, and as a foundation for the last step of a series of three which led up from the pavement to the entrance. Behind this wall a rectangular open space, about 3.65 m. square, was left, which was probably packed with earth, while behind it the piers are joined together by a strip of solid masonry, the worn condition of which seems to prove its use as the flooring at that end of the entrance.

To the west of the piers we find at a distance 3 m. a substantial structure connected with the foundations of the western pier by stout cross walls 2.50 m. apart, which without doubt formed the east end of the porch here bounding the Agora. The walls connecting these two are carefully laid and doubtless served as retaining walls, as we find traces of corresponding ones on the east which have been partly destroyed in later times. Those on the east rested on the heavy foundation wall (B) mentioned before, and possibly those to the west did the same if the wall extended so far. The length of the eastern wall is, however, 0.70 m. greater than that of those on the west and the buttress with which they are connected appears, although it may have supported some superstructure, to have served merely as a retaining wall above Pirene. That this buttress and that forming the end of the porch to the west could ever have formed part of the arch is clearly impossible. In the first place, not only do their distances from the central piers differ, but their lengths neither correspond with one another, nor are either of the same length as the central piers. We must therefore assume that the representations on the coins of Antoninus Pius and Commodus are incorrect. As regards the coins of Domitian and Hadrian, the type of arch represented seems correct; but we cannot judge as to the details on account of the present condition of the ruins. It seems, however, safe to say that the northern front was ornamented with columns, while the southern, to judge from the foundations, was plain. The coins, however, all agree in plac-

ing a quadriga over the arch,¹ whereas Pausanias clearly mentions two, one of Helius and the other of Phaethon; this difference, however, is undoubtedly due to the necessarily limited perspective of coins.

That Pausanias and the other writers of antiquity took so little notice of this arch and its approach appears strange, for not only was this paved roadway so substantial as to be the only one of its kind now preserved in Greece, but the vista, as one came up over the edge of the lower terrace from the harbor of Lechaeum and looked up the long white road flanked by colonnades and ornamented by groups of statuary, to where



FIGURE 5.—MIRROR-CASE FROM CORINTH.

crowning all stood the arch with its gilded bronze quadrigas outlined against Acrocorinth, must have produced an impression not easily to be forgotten.

NOTE. — Since writing this article, Dr. Richardson of the American School at Athens has sent me a photograph of a bronze mirror-case, bearing on one side a medallion representing a triumphal arch with a single opening and on the other a head of the Emperor Nero with the usual titular inscription (Fig. 5).

¹ A coin of Marcus Aurelius represents an arch with three openings, but differs in having a biga instead of a quadriga above. Cf. Mionnet, *Supp.*, vol. IV, p. 682.

This case is in the hands of a dealer in antiquities at Athens, who asserts that it was found at Corinth. If this be so, it is additional and seemingly conclusive evidence that the Propylaea had but one opening. As may be seen from the illustration, the arch, while not exactly like those on the coins, is, nevertheless, of the same type as those of Domitian and Hadrian. It gives more details than any of the coins; it shows the Corinthian columns at the corners as I have supposed them and has the quadriga on top. What the draped figures beside the quadriga, the figures flying from the upper corners, the figure in a niche at the side or the festoon at the top of the arch represent, I do not attempt to decide.

It will be noticed that the four horses shown on this mirror-case bear a decided resemblance to those over the central doorway of St. Mark's Cathedral at Venice, and this is a sufficient excuse for referring here to the half-legendary accounts found in some Byzantine writers, and still current in Greece, that the famous quadriga placed in the hippodrome at Constantinople came from some building at Corinth and was the work of Lysippus; other writers say that a quadriga at Constantinople was brought from Chios, but there may well have been one from each place among the many treasures of art gathered at their capital by the Byzantine emperors. It is well known that the bronze horses at Venice were taken thither from Constantinople.

JOSHUA M. SEARS, JR.

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN RECENT PERIODICALS



GENERAL AND MISCELLANEOUS

Birds employed as Decorations.— In *B. M. Soc. Ant. Fr. (Mémoires*, LX, 1899, published in 1901), pp. 33–52 (2 pls.; 6 figs.), Baron DE BAYE discusses the birds used as decorations at the time of the barbarian invasions. These birds have large hooked beaks, and are probably falcons or other birds of prey. The metal objects decorated with such birds and birds' heads are found, and were made, in various parts of western Europe, in Hungary, southern Russia, and Siberia. The art which originated this decoration is Oriental, and reached the "Scythian" art from Siberia. The Goths spread it in Europe. In *B. M. Soc. Ant. Fr.* 1901, pp. 135–138 (fig.), A. BLANCHET, in presenting to the society a ring and two fibulae ornamented with birds' heads, found at Issoudun (Indre), calls attention to hook-beaked birds on an Argive (proto-Corinthian) lecythus in Boston (*Am. J. Arch.* IV, 1900, pl. vi).

The Early Metallurgy of Lead.— In *Archaeologia*, LVII, 2 (1901), pp. 359–422 (21 figs.), WILLIAM GOWLAND discusses the metallurgy of lead in ancient times. A map shows Roman lead mines and localities for Roman pigs of lead in Britain. The processes used by the ancients for extracting lead from the ore, the uses to which the metal was put, and the alloys of lead, copper, and tin are described.

Ancient Savings-Banks.— In *Jb. Arch. I.* XVI, 1901, pp. 160–189 (33 cuts), H. GRAEVEN publishes a series of temple thesauri or stationary contribution boxes and of terra-cotta "banks" for private savings. The former, usually of stone or bronze, are of Greek or possibly Egyptian origin. The banks are sometimes dated by the hoard of coins, but they are more often broken and empty. They imitate a treasury building (the only Greek type, from Priene), chests, vases, pots, beehives, and probably the wooden

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Dr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the JOURNAL material published after June 30, 1902.

For an explanation of the abbreviations, see pp. 99, 100.

loculi or portemonnaies of the Romans. The last type, the only one which receives plastic decoration, closely resembles the contemporary lamps. A later savings-box is of carved ivory with sliding front.

Scythians in Thrace. — In *B.C.H.* XXV, 1901, pp. 156-220 (23 figs.), G. SEURE continues his 'Voyage en Thrace' by a discussion of 'Établissements scythiques dans la Thrace. Tumuli et Chars thracoscythes.' The article is divided into five parts. (1) Discoveries in the lower valley of the Kritchma, where Seure excavated twenty-six tumuli in 1899 and 1900. Of these twelve were empty, ten were sepulchral of the Thracian epoch, two, containing tombs, belonged to the Roman period, and three were apparently built as military watch-towers. These Seure dates in the fourth century after Christ. (2) Doukhova Moghila, a large tumulus, which seems to be empty, but in the neighborhood of which excavations have been carried on since the middle of the last century. The discoveries before 1893, so far as they can be recovered from oral tradition, are first summarized. They brought to light a number of small objects, some human skeletons, and the remains of several chariots. The excavations carried on by the Bulgarian government in 1893, and by Seure himself, showed clearly that many bodies had been buried around the mound, and also yielded another chariot. (3) This chariot, which was richly ornamented with bronze, is fully described and restored. (4) A detailed discussion of the probable circumstances under which this tumulus and the surrounding graves were constructed. The conclusion reached is that they are the work of a Scythian population which in the fourth century after Christ had settled in the neighborhood of Philippopolis, and had retained the funeral customs described by Herodotus, including human sacrifices at the burial of a chief. (5) In conclusion the literary evidence for the presence of Scythians in Thrace is examined, and it is shown that this settlement is probably due to Constantine, who introduced the Sarmatians into Thrace.

The Necropolis of Kličevac. — In *R. Arch.* XL, 1902, pp. 172-190 (22 figs.), M. M. VASSIRS describes and discusses the necropolis of Kličevac, in Servia, with especial attention to the vases and their decoration. The date of the necropolis is about 2000 B.C. The ornament (incised) is partly geometrical, partly "Mycenaean" in character, and shows that these two kinds of decoration existed contemporaneously in the northern part of the Balkan peninsula long before the "Dorian invasion."

Vases from the Caucasus. — In *B. M. Soc. Ant. Fr. (Mémoires, LX, 1899, published in 1901)*, pp. 1-16 (pl.; 2 figs.), E. POTTIER discusses twenty-three vases from the Caucasus presented by Baron de Baye to the Louvre. The vases are in part hand made, in part made on the wheel. Some have painted decoration, others incised lines. Some are black, like the Italian bucchero. The decoration shows in some cases Greek influence, but this is the exception. The series as a whole confirms the belief in geometrical ornamentation of Asiatic origin. Geometrical ornamentation naturally arises in different places and among different peoples. Greek and Oriental geometrical decoration arose independently, but influenced each other when they came in contact.

Archaeological Interests in Asiatic Russia. — In *Records of the Past* (Washington), I, 1902, pp. 7-14 (5 pls.), G. F. WRIGHT gives a general description of archaeological discoveries in Asiatic Russia. The chief centre

of interest is the museum at Minusinsk, but many other museums exist. Vases, death masks, and utensils are the objects illustrated. The people who made these were probably the ancestors of the Samoyades. Connection between the peoples of northeastern Asia and the American Indians is now fairly established.

The Chams.—The second volume of the publications of the École française d'extrême-orient is *Nouvelle Recherches sur les Chams*, by ANTOINE CABATON (Paris, 1901, Leroux. 211 pp.; illustrated. Large 8vo). The Chams, now scattered in Annam, Cambodge, and Siam, are Malays who came to Indo-China from Java. Their manners, customs, religion, monuments, and language are discussed. Their alphabets are elucidated, and a series of hymns, prayers, and rituals is given in the original and in translation.

Illustrations of Aesop's Fables.—The inscription *C.I.L.* XI, i, No. 1736, is published in *Jh. Oesterr. Arch.* I. V, 1902, pp. 1-3 (1 fig.), by E. BORMANN. The original is at Empoli. Below the inscription the stele has a relief with a representation of the fable of the fox and the crane. O. BENNDORF (*ibid.* pp. 3-8; 2 figs.) discusses alleged representations of Aesop's fables on ancient monuments and publishes a leaf of an illustrated Aesop manuscript of the eleventh century in Leiden.

Hannibal's Passage over the Alps.—In a book entitled *Annibal dans les Alpes* (235 pp.; 17 maps; 6 photographs, 8vo, Paris, 1902, Picard), PAUL AZAN discusses previous theories concerning Hannibal's route and concludes that it lay up the Rhone, the Isère, and the Arc, crossing the mountains at the Little Mt. Cenis. In early times a branch of the Rhone flowed through the Lac Bourget into the Isère. Thus the Rhone and the Isère formed an island. The lower part of the Isère seems to have been considered a part of the Rhone. The geological changes of the region are discussed.

An Important Bibliography.—The second volume of the catalogue of the library of the German Archaeological Institute in Rome, by AUGUST MAU has appeared. In this volume the books in the library are classified by subjects. In volume I, which appeared in 1900, the miscellaneous works were given and a classification of antiquities by places was adopted. The two volumes together form an important bibliography of archaeological works. [*Katalog der Bibliothek des kaiserlich deutschen archaeologischen Instituts in Rom*, von August Mau, Band II, Die Alterthümer nach Classen. Rome, 1902, Loescher & Co. 616 pp. 8vo. 5 fr.]

Archaeological Chronicle of France.—Under the title *Chronique archéologique de la France*, ADRIEN BLANCHET has collected in one volume his notices of archaeological publications in France during the year 1901 and the last months of 1900. These notices were previously published in the *Bulletin Monumental*. Articles on Numismatics are omitted. [Paris, 1902, Picard. 45 pp. 8vo.]

The Topography of Pola.—In *Jh. Oesterr. Arch.* I. IV, 1891, Beiblatt, pp. 169-208 (2 cuts), R. WEISSHÄUPL has a careful study of the topography of the ancient Roman town of Pola in Istria. The environs of the town are also briefly discussed.

The Age of Stonehenge.—SIR NORMAN LOCKYER and Mr. PENROSE have been trying to determine the age of Stonehenge by reference to astronomy. They assume that Stonehenge was a sun temple, and found in front

of it an avenue of two ancient earthbanks extending in the direction of sunrise, precisely in the same manner as in Egypt the long avenue of sphinxes indicates the principal outlook of a temple. They assume also that the temple was originally roofed in, and that the sun's first ray suddenly admitted into the darkness formed a fundamental part of the cultus. On astronomical grounds, they find that in the year 1680 B.C. the midsummer sun poured its rays straight down that avenue and through the middle line of the temple. They, therefore, conclude that this was the date of the foundation of a sun temple at Stonehenge. (*American Architect*, December 28, 1901, p. 104.)

Roman and Romanesque France.—In the *American Architect*, May 10, 1902, S. BEALE begins a series of articles on Roman and Romanesque France. His first article concerns the town of Lyons, where there are various architectural and sculptural remains from Roman times and some Romanesque monuments.

Ethnological Research in the United States.—In the *Proceedings of the American Antiquarian Society*, XIV, pp. 461–470, is a summary of 'Archaeological and Ethnological Research in the United States' for 1901 by F. W. PUTNAM.

Arab Art in the Museum at Cairo.—In *Gaz. B.-A.* XXVIII, 1902, pp. 45–59 (7 figs.), is the first of a series of articles by HERZ on the National Museum at Cairo. In this article a general history of the museum is given and the contents of Halls I and II, of stone and metal respectively, are described. Among them are admirable specimens of Arab art in Egypt.

EGYPT

The Egyptians under the Roman Empire.—In *C. R. Acad. Insc.* 1901, pp. 784–801, R. CAGNAT calls attention to the light shed by recent discoveries upon the private life of the Egyptians in Roman times. He gives translations of a number of private letters and documents, and concludes with the remark that the Roman conquest did not in the least extinguish the individuality of the nations incorporated in the Empire.

A Poet from Andropolis.—In *B. M. Soc. Ant. Fr.* 1900, pp. 303 f. (fig.), a plaque of ivory is published, on which is a seated poet, holding a roll of manuscript, and a standing person, who seems to be playing a wind instrument. The poet is fully draped, the musician half draped. Before the poet is an altar, behind which is a funeral stele. On the seat occupied by the poet is the inscription $\text{AN}\Delta\text{POT}\Pi[\text{O}]\Lambda\text{E}\text{I}\text{THC}$. Andropolis was a town of Lower Egypt. The ivory, now in the possession of Mr. E. Guilhou, was found at Rome. It may have been the cover of a box. Only part of it is preserved.

Graeco-Egyptian Gold Jewellery.—In *Arch. Anz.* 1901, pp. 209–213 (13 cuts), G. KARO discusses the Graeco-Egyptian gold jewellery in the Cairo Museum, its analogies with Greek and earlier Egyptian work, and the use of the pieces as shown in the painted mummy-portraits. A diadem covered with gold feathers held up the back hair like a hood and was supported by a chain over the forehead. There are also chains, bracelets, earrings, and signet rings, many of them of great beauty and extraordinary workmanship.

ASIA

The History of Elam.—In *R. Arch.* XL, 1902, pp. 149–171, J. DE MORGAN gives a sketch of the history of Elam from the earliest times to the final ruin of the country by Assurbanipal not long after 650 B.C. The sketch is based upon the materials furnished by the excavations at Susa from 1897 to 1902. The importance of Elam is made evident, and its relations to Babylonia and Assyria are discussed in some detail.

The Excavations at Susa.—In *Gaz. B.-A.* XXVIII, 1902, pp. 17–32 (9 figs.), E. POTTIER gives a popular résumé of the results of De Morgan's excavations at Susa, with special attention to monuments of artistic interest.

The Sumerian Question.—In *C. R. Acad. Insc.* 1901, pp. 696–706, C. FOSSEY discusses the question whether the so-called Sumerian inscriptions are really in a language not Assyrian (*i.e.* Sumerian), or are merely Assyrian in a different system of writing. He shows that the existence of a Sumerian phonetic system is the only thing that can prove the existence of a Sumerian language; and by setting forth the laws of vowel harmony that regulate the variations of the prefix of the Sumerian optative he establishes the existence of a Sumerian language.

Tablets from Tello.—In *C. R. Acad. Insc.* 1902, pp. 77–94, F. THUREAU-DANGIN describes the contents of a third series of tablets found by DE SARZEC at Tello in 1900. Some of these belong to the period extending from the end of the kingdom of Agadé to the foundation of the kingdom of Ur and give the names, and to some extent the order, of the rulers of this period, during which Shurpurla seems to have enjoyed a considerable degree of independence. Other tablets, of the times of the first kings of Ur, shed light upon the restoration of political unity in Babylonia under Ur-Gur and Dungi.

A Complaint of the Cities of Chaldaea.—In *C. R. Acad. Insc.* 1901, pp. 830–846, J. OPPERT publishes, with translation, the Babylonian poem published by Pinches, *S. Bibl. Arch.* 1901, May and June. The date is Monday, September 14, 287 B.C. Antiochus (Soter) is mentioned as king. The cities of Babylonia had suffered greatly in the wars between the successors of Alexander. In this poem the cities are represented as women and lament their hard fate. Babylon only does not appear. The poem is dated at Babylon. The style and language show the late date. One Greek word appears in the Assyrian.

A Phoenician Stele.—In *R. Arch.* XL, 1902, pp. 200–207 (pls. ix–xi), CH. CLERMONT-GANNEAU publishes and discusses a stele from Oumm el-Awâmid, near Tyre, now in the Ny-Carlsberg museum at Copenhagen. An elderly, beardless man is represented, clad in a long robe and wearing a nearly cylindrical cap. The inscription states that “this stele is that of Ba’alyaton, son of Ba’alyaton, the *rab*.” The monument belongs to the Ptolemaic period.

The Sanctuary of Zeus Madbachos on the Djebel Shêkh Berekât.—In *Hermes*, XXXVII, 1902, pp. 91–120 (3 figs.; 2 facsimiles), W. K. PRENTICE describes the sanctuary at Djebel Shêkh Berekât in Syria, giving especial attention to the inscriptions. For a general statement of the subject of this article see above, p. 27.

The Jupiter of Heliopolis.—In *C. R. Acad. Insc.* 1901, pp. 861–864, is a note from Mr. BONDURAND on the Jupiter of Heliopolis. From the four known reliefs representing the statue of the god it is clear that the figure was upright, enclosed in a sort of chest divided into compartments, each of which had its decoration. The chest was supported by suspenders and ended in a fringe which hid the feet. The figure wore a necklace. The face was beardless. The hair fell in thick curls upon the shoulders. On the head was a calathus. The right arm was raised and held a whip. The left arm, not raised, had some attribute. At the god's feet were one or two beasts. Among the elements in which the four reliefs differ, it is hard to choose; but the beasts were more probably bulls than lions.

A Statue from Baalbek.—In *R. Arch.* XL, 1902, pp. 19–33 (pls. ii–v), S. REINACH publishes a seated draped female statue from Baalbek, now in the museum at Constantinople. At the left of the figure the throne is supported by a sphinx. The head of this sphinx is in the Louvre. The work is fine. The eyes, and also the eyebrows, were once made of some other material and set in. Probably they were of metal, and further incrustation with metal is indicated. The presence of the sphinx beside the figure points to connection with Egypt, while the figure itself is like the Hellenistic representations of Hera and Demeter. The goddess was probably a product of syncretism, with qualities derived from the great Syrian goddess, from Isis, and from Hera. The excellent workmanship with the peculiarity of incrustation shows that in the second century after Christ, the period to which the statue belongs, there was in Syria a school of able artists.

The Deities of Homs.—In *R. Arch.* XL, 1902, pp. 387–391, S. RONZÉVALLE discusses the inscription of a bas-relief from Homs, published in the *Revue Belge*, October 15, 1901. The deities represented are Belus, who appears as a soldier and is identified with Ζεύς *κεραύνιος*, Iarebolus, whose figure has disappeared, but was probably not armed, Aglibolus, who appears as an armed god, and a female deity identified with Athena, whose name was Sema or Semia.

A Bronze Goat's Horn from Cyprus.—In *C. R. Acad. Insc.* 1901, pp. 803–809 (3 figs.), A. HÉRON DE VILLEFOSSE discusses a bronze horn found between Lapithos and Larnax Lapithou, in Cyprus. Its length is 0.91 m., and its weight 5.732 kgm. It was evidently set into some object, probably the head of a large stone wild goat. Similar instances from Babylonia and Persia are cited. A silver hind in the Louvre, found in Syria, once had antlers, and was probably part of a group of Heracles and the Gerynitian hind. The wild goat from the Tyszkiewicz collection, now in Berlin, of silver plated with gold, is also mentioned.

Hittite Writing.—At the meeting of the Society of Biblical Archaeology, June 11, 1902, A. H. SAYCE read a paper on Hittite hieroglyphs, in which he showed that ideographs of “king” and “district” can be distinguished, the word for “high priest” identified, and the proper names *Gargame(s)* (Carchemish) and *Markhas* made out. Suffixes are written phonetically, but the nouns and verbs to which they are attached are usually written ideographically. (*Athen.* June 21, 1902. See *Monthly Review*, September, 1902, pp. 101 ff.)

Ormela.—In *Hermes*, XXXVII, 1902, pp. 152–154, W. CRÖNERT discusses the inscriptions, chiefly of the third century B.C., of the *δῆμος Ὀρμηλέων*,

between Kibyra and Olbasa on the boundary of Phrygia and Pisidia (see especially STERRETT, *Papers of the American School at Athens*, II, 1888). The name of the place was probably Ormela. The proper names are especially interesting.

The Passes of the Taurus.—In *Jh. Oesterr. Arch. I. V*, 1901, pp. 204–207 (1 cut, a map), F. SCHAFER describes the passes across the Taurus mountains to Tarsus, and briefly discusses Menon's route (*Anab.* I, 2, 20), which he believes to have been that by Aidost-Bel.

Inscriptions from Acmonia in Phrygia.—In the *Revue des Études Anciennes*, IV, 1902, pp. 77–84, V. CHAPOT publishes in facsimile the inscription of L. Claudius Julianus and the testament of Titus Praxias previously published by RAMSAY, *ibid.* III, 1901, pp. 269–279 (cf. *Am. J. Arch.* 1902, p. 201).

Roman Quarries in Phrygia.—In *B. M. Ant. Soc. Fr.* 1900, pp. 323–332, P. MONCEAUX publishes three inscriptions from Synnada, in Phrygia, now in Paris, and discusses the management of the Phrygian quarries. The marks found on stones at the quarries do not agree with the marks found on Phrygian marble at Rome. The first marks were probably cut at the quarry, the second at the town of Synnada. The second marks agree more nearly with those found on stones from Africa.

The Post-Trojan Settlements at Hissarlik.—The post-Trojan settlements at Hissarlik were discussed by H. SCHMIDT, A. BRÜCKNER, and others at the February meeting of the Berlin Arch. Gesellsch. The first period of the seventh city is still Mycenaean, the second is marked by the invasion of some barbarian stock which had intercourse with Greeks. The eighth city, with remains dating from the eighth century, is certainly Greek. The temple of Athena is earlier than 700 B.C., and certain peculiarities of ritual are Mycenaean survivals. (*Arch. Anz.* 1902, pp. 13–14.)

The Site of Cyzicus.—The site of Cyzicus, left desolate since an earthquake in 1063, has been newly examined and a plan drawn by R. DE RUSTAF-JAELL. Besides the city walls and aqueducts and the harbors and channels that can be traced in the marshy neck, once clear water, which separates the island from the mainland, there are important remains of buildings of the Graeco-Roman period, theatre, amphitheatre, prytaneum, etc., all thickly overgrown with brushwood. Immense quarries of beautiful marbles near the site account for the magnificence of the temple of Hadrian, still the most conspicuous ruin. (*J.H.S.* XXII, 1902, pp. 174–189; plan; 8 cuts.)

The Great Altar at Pergamon on a Bronze Coin.—In *C. R. Acad. Insc.* 1901, pp. 823–830 (2 figs.), A. HÉRON DE VILLEFOSSE publishes and discusses a bronze coin struck by the Pergamenes between 193 and 211 A.D. It was found by the Abbé Sauvaire, at a place called Bourguet, in the parish of Durance (Basses-Alpes), and proved to be identical with a coin in the British Museum (*Catal.* VII, pl. xxx, 7). On the reverse the great altar is represented. Over the altar proper is a high arched canopy. At each side of the stairs is a portico with four columns, surmounted by statues. Before each portico is a colossal figure of a bull. The statues and bulls were doubtless of bronze. (Cf. *Arch. Anz.* 1902, p. 12; 1 fig.)

Inscriptions in Latrinae at Ephesus.—In *Jh. Oesterr. Arch. I. V*, 1902, Beiblatt, Coll. 33–34, R. WEISSHAUPL briefly discusses the inscriptions published by Heberdey, *ibid.* I, 1898, Beiblatt, col. 75, and shows their connec-

tion with *Anth. Pal.* X, 87, and XV, 19. Cf. *Anth. Pal.* X, 62, 65, 96, IX, 182, and IX, 642-644, 662.

Inscribed Bronze Tablets from Aeolis.—In the *Revue des Études Anciennes*, IV, 1902, pp. 85-88, P. PERDRIZET publishes five inscriptions from Pitane and Cyme. These are engraved in dots (*pointillé*), in small bronze tablets (cf. Pottier and Reinach, *La nécropole de Myrina*, p. 206). Each inscription consists of a name and a father's name. Aeolic forms are used. The date is about 200 B.C.

GREECE

ARCHITECTURE

The Temples of Athena on the Acropolis.—In *Jb. Arch. I.* XVII, 1902, pp. 1-31 (7 figs.), A. MICHAELIS discusses the temples of Athena on the Acropolis, especially *ὁ ἀρχαῖος νεώς*. He believes that the original or oldest temple, *ὁ ἀρχαῖος νεώς*, was on the site of the present Erechtheum, and like it, a double building; that both this and the Hecatompedon, which had been erected on the site of the Mycenaean palace in the second quarter of the sixth century and enlarged by the peripteron toward the end of that century, were left standing, the latter without the peripteron, after the Persian fires; that the older one was destroyed only to be replaced by the present building in the intervals of the Peloponnesian War, while the Hecatompedon, now known as *ὁ παλαιὸς νεώς*, in contrast to the newer Parthenon, remained until destroyed by fire in 406; that the opisthodomos was the inner west porch of the Parthenon, *ὁ μέγας νεώς*, and corresponded exactly to the pronaos at the east end; that the name opisthodomos came later to cover both this semi-open room and the adjoining west hall, *ὁ παρθενών*, because they were used together as a treasury, and because the latter name came to be applied to the building as a whole. The two buildings which enclosed the sacred symbols, the Erechtheum and its predecessor, had a strictly religious character, and to them belonged the ancient wooden image, while the Hecatompedon and the Parthenon were for more public and secular purposes. Of the *poros* sculptures, the Triton and Typhon groups are from the Hecatompedon in its first form, the Gigantomachia from the peripteral addition.

Pausanias and the Erechtheum.—In *Jb. Arch. I.* XVII, 1902, pp. 59-64, E. PETERSEN criticises some of Michaelis's views concerning the Erechtheum and Pausanias's visit to it, as expressed in the new edition of his *Arx Athenarum*, and incidentally some of Dörpfeld's. He argues that Pausanias entered by the north door, that the "altar of the burner of incense" in the north porch was the "altar of Zeus Hypatos," that the three altars seen inside were in the westernmost room, and the salt spring in the inner room.

The Temple at Thermus and the Tholos at Epidaurus.—In *R. Ét. Gr.* XIV, 1901, pp. 409-412 (fig.), H. LECHAT gives a summary of Soteriades' account of his excavations at Thermus (see *Am. J. Arch.* 1901, p. 101). *Ibid.* pp. 412-415 (fig.), he gives a summary, with some criticism, of an article by Svoronos in which the *tholos* at Epidaurus is explained as the tomb of Asclepius, under which the labyrinth was built to suit the size and coil of the great serpent, while the part of the building above ground was supposed by all but the priests to be the temple of Hygieia (*J. Int. Arch. Num.* IV, 1901, pp. 1-30).

The Orientation of Greek Temples. — *B.C.H.* XXIV, 1900, pp. 611–614, contains a letter from F. C. PENROSE on the orientation of the temples at Delphi and Tegea, and of the grotto of Mt. Cynthus on Delos. At Delphi, the situation does not permit the east front to receive the rising sun, and the temple seems to have been oriented so that the sun should appear through a gap in the mountains to the southeast. The heliacal setting of ϵ Canis Majoris would have corresponded with the appearance of the sun at this point on November 8, 950 B.C., which may be the date of an earlier temple. At Tegea, Penrose only gives the orientation of the wall of the church at Piali. On Mt. Cynthus the axial line is the joint formed by the roof stones. This, combined with the sun and the rising of the star α Librae, indicates 1550 B.C. as the date of the formation of the grotto.

SCULPTURE

Ionian and Cretan Influence upon Greek Sculpture. — In *B.C.H.* XXIV, 1900, pp. 427–462 (4 pls.; 3 figs.), under the title ‘Monuments Figurés de Delphes — La Sculpture dans le Péloponnèse et les Influences Ionienne et Crétoise,’ TH. HOMOLLE discusses two examples of early Greek sculpture. I. ‘Le Trésor de Cnide et Bathycles de Magnésie.’ The Cnidian Treasury at Delphi, erected in the last half of the sixth century, shows the qualities of Ionic art. As the work cannot have been transported to Delphi in a finished state, the artists and workmen must have been sent to Greece for this purpose, or there must have been in Greece at the time a body of sculptors trained in Asia or under Asiatic influence. The destruction of the Lydian empire and the Persian conquests seem to have led many artists toward the west, and one of the most celebrated was Bathycles of Magnesia, the maker of the throne of Apollo at Amyclae. In the prodigal use of sculpture, in the choice of subjects, and especially in the employment of the caryatid, the Cnidian treasury and the Amyclaeon throne have much in common, and a study of one is necessary to an understanding of the other. Homolle analyzes the text of Pausanias, and proposes a reconstruction of the throne as a long seat in five compartments, in front of which stood the statue of the god on the base which served as the altar of Hyacinthus. The material was probably stone. Homolle emphasizes the importance in the history of Greek art of the predominance in the Peloponnesus of Ionic influence, and the prolonged activity of eastern artists in the West during the sixth century. This fact affords an explanation of the presence of a signature in the Argive alphabet on the frieze of the treasury, which indicates the presence of a Peloponnesian artist working from Ionian models and under the direction of an Ionian architect. The throne of Bathycles is a monument of the activity of Ionians of Asia Minor in the Peloponnesus; the treasury of the Cnidians furnishes written proof of the collaboration of a Peloponnesian on an Ionian work in northern Greece. Two “Apollo” statues from Delphi, while showing the influence of Ionia, can also be connected with Crete. II. ‘Deux Statues archaïques de l’École argienne.’ Both statues were found near the treasury of the Athenians, and are well preserved. The base of one bears an almost illegible inscription between the feet, and also the artist’s signature written retrograde, — [Πολ]υμέδης ἐποίησεν Ἀργεῖος. The style of the writing and the character of the statue point to a date in the early part of the sixth century. The two statues resemble each other so

closely that it seems clear that they formed part of the same monument. If they are gods, they are probably the Dioscuri; if men, Cleobis and Biton. Examination of the style and technique of the figures leads to the conclusion that they show in a primitive form the same tendencies which characterize the later Argive masters, and that Polymedes may be recognized as a precursor of Polyclitus. In the points in which these statues differ from the early Ionian figures they find their closest analogues in a *poros* figure from the neighborhood of Tegea, and a limestone statue from Crete. This agrees well with the traditions of a Cretan school, and of the activity of Dipoenus and Scyllis at Argos and the Cretan Cheirisophus at Tegea. It is, however, in Ionia that the origin of these artistic types is to be sought, and it is to Ionian influence that we must attribute the unity, which in spite of the crossing and recrossing of artistic currents marks the art of the sixth century, and renders so difficult the exact classification of its remains.

The publication of the 'Monuments Figurés de Delphes' is continued by Homolle on pp. 582-611 (3 pls.; 9 cuts), with a discussion of 'Les Caryatides du Trésor de Siphnos.' The type of caryatid introduced at Delphi by the architect of the treasury of Cnidus seems to have immediately become popular. Fragments of one and perhaps two pairs of similar figures from buildings erected at about the same time have been found. One pair is represented only by two fragments of legs, closely wrapped in the chiton, and its architectural character must remain doubtful. The other pair can be reconstructed from a head and several fragments, found in the same deposit as the caryatids of the Cnidians, but not belonging to the same building. Homolle gives a full description of the fragments, and a reconstruction of the figures. The head is crowned with a *polos*, which is decorated in front with a relief representing Apollo Citharoedus, followed by four women, toward whom advance three women and Hermes, who is playing on a syrinx. This composition recalls vividly the relief from Thasos. The place in which the fragments were found, their size and general style, render it certain that they belonged to a building near and very similar to the treasury of Cnidus. Such a building was the treasury of Siphnos, which was built in 525 B.C., shortly after that of Cnidus, and certainly stood very near it, though the exact position cannot be fixed. Homolle compares minutely the style and technique of the Siphnian and the Cnidian caryatids, and finds a marked general resemblance with some significant differences. The treatment of the drapery, the face, the *polos* as part of an architectural member, and the other details of the capital, all show the same tendencies: at Cnidus, more luxuriant decoration, more striving for effect, a greater breadth of treatment, more brilliancy; at Siphnos, a juster appreciation of harmony and proportion, more moderation and severity, a hand less trained perhaps or less fond of finish, but great sincerity of observation and conscientiousness in execution. The few fragments that remain of the other decorations of the building seem to show the same qualities. The head of the Siphnian caryatid bears a close resemblance to two of the *Kôpai* of the Acropolis (*Mus. d'Ath.* pls. ii-iii, vii-viii; Collignon, *Hist. Sculpt. Gr.* I, pl. i), and the treatment of the drapery resembles that found on one of the Delian figures. The same characteristics appear in early Parian works, and as we know that the Parian artist Charopinos and his family worked at Delphi during the sixth century, it is possible to attribute to a Parian the decoration of the treasury of Siphnos. It seems almost certain

that it is the work of an artist of the Cyclades, and it shows, in comparison with the contemporary Ionic sculptures of the Cnicians, both the dependence of the art of the islands upon the Greek art of the East, and also the tendencies which connect it with the sculpture of continental Greece.

Archaic Thasian Reliefs.—In *B.C.H.* XXIV, 1900, pp. 553-574 (3 pls.; 1 fig.), G. MENDEL publishes two archaic reliefs from Thasos. The first is a small stele now in the Louvre, representing a seated female figure, holding a flower in one hand and a dove in the other. The type is well known, and as the size of the relief seems to show it was not sepulchral, it is probably a votive offering to Aphrodite. The technique, which consists in cutting away the ground around a silhouette of the subject, is common in the archaic period. It is to be attributed, with Conze, to the influence of the ceramic art, where the outlines were first drawn on the surface. An examination of these reliefs shows the influence of another device of the potter, for it is clear that in many cases the outlines were drawn with the aid of a shadow thrown on the surface, while the details were added later, and often very inaccurately. The Thasian relief is dated about 500 B.C. The second relief is on a quadrangular pillar on the line of the wall surrounding the plain of Limena, near an ancient gate. The pillar is irregularly pyramidal, 2.85 m. high, and much damaged. The relief represents a goddess seated on a throne, holding a sceptre. The head is missing and the right hand is badly mutilated. Before her stands a winged female figure. Under the throne is the small figure of a nude dancing man. The pillar probably formed part of the decoration of a gate sacred to Demeter, as the neighboring gate seems to have been dedicated to Heracles and Dionysus. The winged figure might be Iris, Nike, or Hebe. The fortifications of Thasos date from the period between 476 B.C. and the capture of the city by Cimon about 463 B.C. The style of the relief agrees well with this date. If this is correct, the great relief of Apollo and the Nymphs is not later than the first decade of the fifth century, while the stele of Philis is somewhat later than the Demeter relief. A close examination of the relief with Heracles bending his bow shows that, in spite of the archaic appearance, many of the details are quite consistent with the date assigned to the wall. The figure of Heracles can be brought into connection with other Ionian works, but the other Thasian sculptures are more closely connected with Furtwängler's "Parian" group, though marked by a grace analogous to that which gives its charm to Attic art.

A Lyre-player of Ionic Style.—In *B.C.H.* XXIV, 1900, pp. 532-541, M. COLLIGNON discusses a marble torso of a citharoedus in the Louvre. The figure has been scarcely noticed outside of the *Catalogue sommaire* of the Louvre, where it is incorrectly described as a female, and Michaelis' catalogue of the Strassburg Museum, where it is called a citharoedus. This is undoubtedly correct, though there is nothing to show whether Apollo or a mortal is represented. The general appearance recalls the *Kôpai* of the Acropolis, but the hair is arranged in separate locks, not in a heavy mass, and the costume is very like that of Apollo on the relief from Thasos in the Louvre. It shows the same mass of drapery over the left arm, which appears also on some representations of Apollo Citharoedus on vases, and seems to be the cover of the lyre. The statue belongs to the first quarter of the

fifth century, and is a work of the Ionic school, though the place where it was made cannot be determined. The time and place of its discovery are unknown.

The Archaic Stele from Pharsalus.—In *B.C.H.* XXIV, 1900, pp. 358–360, P. PERDRIZET has a note on the archaic relief from Pharsalus in the Louvre (Bruun-Bruckmann 58). It has no symbolic significance, but represents two young girls about to commence a game with astragali. One of them has her astragali in her left hand, the other carries hers in a bag. The relief therefore belongs to that class of archaic monuments in which the deceased are represented as engaged in their usual occupations or amusements.

Greek Life in Sculpture.—A. BRÜCKNER, contrasting stelae of the Alxenor type (the old man in a mantle, leaning on a staff and feeding his dog) with those of the Aristion type (the warrior with elaborate dress and equipment), sees evidence of the change of taste, from Asiatic luxury and display toward true Greek simplicity, which characterized the period immediately preceding the Persian Wars. (*Jb. Arch. I.* XVII, 1902, pp. 39–44; 1 pl.)

An Attic Marble Head.—In *Ἐφ. Ἀρχ.* 1901, pp. 143–146 (pl. viii), A. FURTWÄNGLER publishes the marble head mentioned by him in *Athen. Mitth.* 1880, p. 40, which has remained unpublished for years in the National Museum at Athens. The head was part of a relief, but is broken away from the background. It is the head of a youth, whose wavy hair is confined by a double band about the head. In style it resembles the heads from the metopes of the temple of Zeus at Olympia, but shows more delicacy and refinement. In 1878 it was the only known Attic work resembling the sculptures of Olympia. Now it is but one of a series.

The Pythian Apollo in the Louvre.—In *R. Arch.* XL, 1902, pp. 196–199 (pl. vii), ARTHUR MAHLER discusses the statue of the Pythian Apollo in the Louvre (Clarac, 136, 1 R). In posture, shape of the head, and treatment of the hair it is Polyclitan; in treatment of the body, Praxitelean. The head is especially dependent upon the amazon of Polyclitus. Special similarity of the Apollo to the Dionysus of Tivoli and the Hermaphrodite of the villa Albani is pointed out. The Apollo is an example of the reciprocal influence of Argive and Attic art.

A New Stele from Athens.—In *J.H.S.* XXII, 1902, pp. 1–2 (1 pl.; 1 cut), A. S. MURRAY publishes a portion of a stele from Athens, recently acquired by the British Museum, and compares the figure of a youth upon it to the Heracles on a votive stele from Mt. Ithome, usually regarded as Polyclitan.

A Replica of the Aphrodite of Arles.—In *R. Arch.* XL, 1902, pp. 301–303 (1 pl.), ARTHUR MAHLER calls attention to a replica of the Aphrodite of Arles in the Louvre (Clarac, 173, 8 R; Froehner, *Notice*, No. 138; Klein, *Praxiteles*, p. 293). A drawing of this statue is found on pl. 11 *bis* of the album of the sculptor Pierre Jacques, Rome, 1572–1577, recently published by S. Reinach. The head of the statue is, however, not the same. The head drawn by Jacques is now on another statue in the Louvre (Clarac, 167, 4 R; Froehner, *Notice*, 44). The head now on the statue of Aphrodite is ancient, but neither this nor the head drawn by Jacques belongs to the figure.

Bronze Head in the Prado at Madrid.—In the *Boletín de la Sociedad Española de Excursiones*, X, 1902, pp. 25–28 (pl.), NARCISO SENTENACH publishes a bronze youthful male head in the Prado Museum. It was bought by Queen Isabella Farnese, at Parma (HUBNER, *Die Antiken Bildwerke in Madrid*, p. 94). A brief discussion of the styles of the chief Greek sculptors, especially of Praxiteles, Scopas, and Lysippus, leads to the conclusion that the head is a work of Praxitelean style, executed in the early years of the fourth century B.C.

The Barberini Faun.—G. HABICH suggests a new model for the restoration of the Barberini Faun at Munich, comparing it rather with a relief of the sleeping Polyphemus than with such figures as the bronze satyr in Naples. He finds that it gains greatly by being tipped somewhat farther back and toward the left side, by having the restored right leg extended farther from the body than at present, and by allowing both feet to project from the rock support. It must originally have been set into a natural rock background, out of doors. (*Jb. Arch. I. XVII*, 1902, pp. 31–39; 4 cuts.)

The Praying Boy of the Berlin Museum.—In *Röm. Myth.* 1901, pp. 391–394 (2 pls.), E. LOEWY argues strongly for the connection of this bronze with the art of Lysippus, a relation that has been often doubted recently, or regarded as impossible of affirmation. He compares it particularly, by the aid of illustrations, with the Apoxyomenus and the resting Hermes of Herculaneum.

The Child with a Bird.—In *Jh. Oesterr. Arch. I. IV*, 1901, pp. 209–212 (4 half-tones), CARL HADACZEK seeks to find the original of the statue of a child holding a bird, which is in the Museo Chiaramonti (*Catalogue*, 1858, No. 110), in a sepulchral or votive figure, presumably of Attic workmanship and later than the fourth century B.C.

Wiping the Strigil.—In *Jh. Oesterr. Arch. I. IV*, 1901, pp. 151–159 (2 pls.; 7 cuts; 4 half-tones), P. HARTWIG publishes the statuette of an athlete in the Museum of Fine Arts in Boston. The hands of the figure are somewhat broken, but the *motif*, through a comparison with some figures on vases and gems, is shown to be that of wiping off the strigil with the finger. A statuette in the Vatican (Helbig, *Führer*, I² 26, n. 46), a statue in Florence (*Röm. Myth.* 1892, pl. iii, pp. 81 ff.), and the bronze statue of an athlete found at Ephesus and now in Vienna are briefly discussed in their relation to the Boston athlete.

The Bronze Statues in Naples.—In *Jh. Oesterr. Arch. I. IV*, 1901, pp. 169–189 (14 half-tones; 6 cuts), OTTO BENNDORF discusses the large bronzes in the museum at Naples. Special attention is given to the bronze Ephebus found just north of Pompeii (*Not. Scavi*, 1900, pp. 584 ff.; *Am. J. Arch.* 1901, pp. 466 f.), and to the “Dancing Women.” He shows that none of the bronzes should be considered originals, except some late and inferior pieces. The gist of the article is contained in the paradox “that the originals in the Naples collection of large bronzes are worthless from the point of view of the history of art and that those pieces which are valuable from the point of view of the history of art are not originals.” At the time of the *virtuosi* of Herculaneum and Pompeii there was probably in Greece a trade in the reproduction of antiquities which has its analogy in the antiquarian trade of modern Naples.

The Aphrodite of Melos. — In *R. Ét. Gr.* XV, 1902, pp. 11-31, ÉTIENNE MICHON publishes, with comments, a number of letters and records concerning the acceptance of the Aphrodite of Melos by the king and its entrance into the Louvre. A statue found February 3, 1827, in a niche near the spot where the Aphrodite was discovered, had an inscription (on a column on which the statue leaned): Ἀντιφάνης Θρασυμίδου Πάριος ἐποίηε. It is probably identical with a statue, now in the Berlin Museum, representing a deceased man as a hero. In a second niche were found fragments of a statue with an inscription on the base: Ἐπιάνας ὁ πατήρ καὶ ὁ ἀδελφὸς Ὀνόμαρχος Ἀγησιμένην Ἑρμῇ καὶ Ἡρακλεῖ. These discoveries were made by Theodore Xeno, a Dutch agent at Melos, who writes that he made excavations and found the "wall of the temple" at the spot where the Aphrodite was found.

Relief from the Sepulchre of a Rhodian Schoolmaster. — In *Hermes*, XXXVII, 1902, pp. 121-140 (1 pl.; 4 figs.), F. HILLER v. GAERTRINGEN and C. ROBERT publish and discuss a relief found near Trianta (Ialysos) in Rhodes. It is incomplete at both ends. Originally it was probably set above the door of a tomb. Inscriptions read: Ἱερωνύμου τοῦ Σμυλίνου Τλώιον and Δαμάτριος ἐποίησε. At the left Hieronymus is represented reading a scroll to a group of listeners. This scene resembles that of the mosaics supposed to represent Plato and his pupils (*Röm. Mith.* XII, 1897, pp. 328 ff. etc.), and may have been a typical representation of a teacher and his pupils. The other scenes, separated from the first by a door-post, are in Hades, where Hieronymus appears beside Pluto and Persephone. A female figure with butterfly's wings is interpreted as Nemesis. Other figures represent the blessed and the condemned. The work belongs to the second century B.C. The inscription *I. G. Ins.* I, 141 may refer to this Hieronymus. In an appendix the Τλώιοι are discussed. Τλώιος may be the demoticum of Phoinix, a place on the mainland belonging to Rhodes. (See also *Arch. Anz.* 1902, p. 20, where the relief is published, with a summary of remarks by Hiller v. Gaertringen.)

Notes on Ancient Sculpture. — In *Gaz. B.-A.* 1902, pp. 139-160 (1 pl.; 18 figs.), S. REINACH publishes a series of notes under the title 'Courier de l'Art Antique.' He begins with remarks concerning the restoration of statues as performed in the sixteenth, seventeenth, and eighteenth centuries, with which he contrasts the "restitution" of ancient works inaugurated by G. Treu and carried on by others. Remarks are added relating to ancient copies, and the opinion is maintained that bronze statues were copied by means of moulds and casts, while marble and chryselephantine works were not copied in this way and therefore not so accurately. The "restitution" of the Nike of Paenion with the aid of the Roman head in the possession of Miss H. Hertz (*Röm. Mith.* IX, p. 162, pl. vii; TREU, *Olympia*, III, pp. 188-192) is described. Other statues and restorations discussed are the Zeus at Dresden (TREU, in *Festschrift für Otto Benndorf*, Vienna, 1898, pp. 99 ff.; pls. ii, iii), the Demeter recognized by AMELUNG (*Röm. Mith.* XV, p. 181), the Kauffmann head of the Aphrodite of Cnidus, the sleeping satyr in Munich (BULLE, *Jb. Arch. I.* 1901, pp. 1 ff.), the Hera of Polyclitus (WALDSTEIN, *J.H.S.* XXI, 1901, pp. 30 ff.; pls. ii, iii), the bronze youth found at Ephesus (*Jh. Oesterr. Arch. I.* 1901, p. 15), the Alexander from Magnesia (WIEGAND, *Jb. Arch. I.* 1899, pp. 1 ff.; pl. ii), the Alexander

head now in Boston (*Mon. Antichi*, VI, pl. i), an Alexander in the Musée Guimet, a Roman portrait bust in the Stroganoff collection at Rome (*Mon. Mém. Acad. Insc.* VI, p. 149, pl. xiv), which probably represents not Caesar, but some Roman stoic, such as Domitius Corbulo; and finally an engraved mirror case in the British Museum (*J.H.S.* 1899, p. 317, pl. ii) is reproduced and described.

In the *R. Ét. Gr.* XIV, 1901, pp. 415-469 (18 figs.), HENRI LECHAT discusses thirty-two of the more interesting articles and groups of articles on Greek sculpture which appeared in 1901 and the last part of 1900. Summaries of all these articles have appeared in this JOURNAL with the single exception of one on Graeco-Buddhist sculptures (A. FOUCHER, *Mon. Mém. Acad. Insc.* VII, 1900, pp. 39-64; pls. v, vi). The sculptures there discussed show the great influence of Greek art in India in the two first centuries after Christ.

VASES AND PAINTING

Catalogue of Vases at Athens.—The eighty-fifth volume of the *Bibliothèque des Écoles Françaises d'Athènes et de Rome* is a catalogue of the painted vases in the National Museum at Athens, by M. COLLIGNON and L. COUVE. The vases are numbered consecutively from 1 to 1988. The general arrangement is chronological, the vases of primitive style being followed by those of geometrical style, Ionian and Corinthian style, black-figured vases, and so forth, and within the limits of this general arrangement various subdivisions are made; in the earlier part of the book with reference to the places where the vases were made or found, in the latter part with reference to their shapes. This careful and apparently accurate catalogue shows most clearly the great importance of the collection, and is at the same time a monument of the learning and industry of its chief author, Louis Couve, whose untimely death is much to be regretted. A supplementary volume is to contain indexes and plates of shapes. (*Catalogue des Vases peints du Musée Nationale d'Athènes*, par M. COLLIGNON et L. COUVE. Paris, 1902, Fontemoing, ix, 671 pp., 8vo.)

A Vase of Geometric Style.—In *B.C.H.* XXV, 1901, pp. 143-155 (8 figs.), M. LAURENT writes 'Sur un Vase de Style géométrique.' The vase is a small amphora of unusual shape, resembling a pithos, and belongs to the middle of the eighth century B.C. On one shoulder is a ship with eight rowers, which differs from the usual 'Dipylon' type, but closely resembles the Homeric vessels, with raised decks at the bow and stern and a block for stepping the mast in the centre. On the other side of the vase are two pugilists, and between them a tripod. Other examples of tripods on geometric vases are collected. The tripods were the prizes in the contests which are usually suggested by the accompanying representations, though in some cases they may be connected with religious rites.

Boeotian or Thera Amphorae.—A late geometric amphora once belonging to G. Finlay and now to the British School at Athens, is of the class called Boeotian, but came from Thera. As many other vases of the same fabric have been found there, it is probable that the class is really Thera, not Boeotian. (J. FF. BAKER-PENOYRE, *J.H.S.* XXII, 1902, pp. 74-75; cut.)

The Origin of the Swastika.—In *R. Arch.* XL, 1902, pp. 372-386 (7 figs.), S. REINACH publishes a Boeotian stamnos in the museum at Madrid

adorned with two storks and various geometrical patterns, among them two eight-legged 'swastikas.' The outer lines of these swastikas are double, giving the effect of open beaks. The possibility of the development of the swastika from representations of storks is discussed, as are the theories of Von den Steinen and Houssay who derive the swastika and the triskelon from the stork and the octopus respectively. The three-legged figure (triskelon) is derived by Von den Steinen from the cock. Primitive representations of animals are connected with totemism. Proofs of totemism in Greece are given.

New Evidence on the Melian Amphorae.—A large "Melian" amphora actually found in Melos and now at the British School in Athens is the sixth example of this isolated class. Among the shards found in the burial lot on Rheneia, to which the graves from Delos were transferred at the purification of the island in 426–425 B.C., there are fragments of several similar amphorae and of some hundreds of smaller vases of identical fabric, which strongly suggest that this ware is really Delian, even if made of imported clay. It is a direct descendant of the native Aegean polychrome pottery known chiefly at Phylakopi, independent of the contemporary geometric and Oriental influences. No complete vase beside the monumental amphorae has been found, but a small spherical bowl from Melos, now at the British School, has many of the characteristics of the ware. (J. H. HOPKINSON and J. FF. BAKER-PENOYRE, *J.H.S.* XXII, 1902, pp. 46–74; pl.; 14 cuts.)

A Signed Proto-Corinthian Lecythus.—In *R. Arch.* XI, 1902, pp. 41–46 (2 figs.), F. B. TARBELL publishes a small proto-Corinthian lecythus in the Museum of Fine Arts in Boston (see *Am. J. Arch.* 1899, p. 574), with simple linear adornment and the inscription Πύρ (ρ)ος μ' ἐποίησεν Ἀγασιλέφο. The dialect and alphabet point to Chalcis, but the form of *gamma* is not known as Chalcidian. The inscription may be the work of a Chalcidian or an Athenian living in an alien community, or of an alien living at Chalcis. The date is the eighth century B.C. *Ibid.* pp. 47 f., C. D. BUCK, in a note on the form Ἀγασιλήφου, regards the digamma as an etymological *Ϝ*, and says there is no reason to be surprised at its appearance in an inscription of such early date.

A Proto-Attic Vase.—Important fragments of a monumental amphora, found in an early burial ground at Cynosarges, show peculiarities in the treatment of flesh, eye, ear, etc., and in the use of engraved lines together with outline drawing and white-line detail, which place it near the beginning of the increasing series of early Attic vases, between Dipylon and established black-figured wares. The scenes are a sepulchral chariot group, a Heracles and Antaeus, — perhaps the earliest instance known, — and an animal frieze. The openwork handles, imitating metal, are especially elaborate. (C. SMITH, *J.H.S.* XXII, 1902, pp. 29–45; 3 pls.; 1 cut.)

A Cyrenaic Cylix.—A new Cyrenaic cylix from Corneto has recently been acquired by the Berlin Antiquarium. The inner decoration, part of a frieze of warriors carrying the dead, shows the usual lack of relation between subject and space. While the form and ornament of these cylices are Ionic, the instinct of the painter, narrative rather than decorative, is decidedly western, allied to the Corinthian. (E. PERNICE, *Jb. Arch. I.* XVI, 1901, pp. 189–195; 1 pl.; 3 cuts.)

Eretrian Amphorae of the Sixth Century.—In 'Εφ. 'Αρχ. 1901, pp. 173–195 (pls. ix–xii), MARCEL LAURENT publishes three amphorae from Eretria. Two were found by Kourouniotes in 1898, one in 1889. All are large amphorae with lids. Two are slender, with relatively high feet; the third is nearly spherical. All are painted with black figures, on which red and white colors occur. The chief representation on one is the Judgment of Paris; on the second the combat of Heracles and Iolaus with the Hydra; on the third the marriage of Peleus and Thetis. Here the two chief figures are standing in a chariot. The vases are further adorned with rows of animals, geometrical figures, standing persons, and in one case a four-horse chariot, seen from the front. In style and technique these vases show Ionic traditions modified by Attic influence. They are the products of Eretrian manufacture.

Mythological Scenes on Vases in Berlin.—In *Jb. Arch. I.* XVII, 1902, pp. 53–59 (3 cuts), P. WEIZSÄCKER discusses the scenes on two vases in Berlin, an unsigned work of Amasis on which a woman wearing a garland is seized by two youths, — apparently the capture of Helen by Theseus and Perithous, — and one by Oltor and Euxitheos with two scenes which both belong to the story of the Trojan War, though they are not found in the same form in the *Iliad*. They are the contest over the body of Patroclus, — Ajax and Diomed against Aeneas and Hippiasus, — and Achilles taking leave of Nestor while Iris, Amphilocheus, and Phoenix are grouped about his chariot — evidently the departure for revenge upon Hector.

The Paintings of Scenes of the Eleusinian Cult.—In 'Εφ. 'Αρχ. 1901, pp. 163–174, A. N. SKIAS replies to the criticisms of I. N. Svoronos (*J. Int. Arch. Num.* IV, 1901, pp. 169 ff.), and defends his interpretation of the paintings representing scenes of Eleusinian cult ('Εφ. 'Αρχ. 1901, pp. 1 ff.; cf. *Am. J. Arch.* 1902, p. 207). The white lines on the first plaque do not divide the painting into separate scenes; the similar figures are not intended to represent the same persons; the entire subject is a procession, not a dance. Further remarks of Svoronos in a later issue of the *J. Int. Arch. Num.* are briefly answered in a note.

The Originals of Pompeian Paintings.—In *Jh. Oesterr. Arch. I.* V, 1902, pp. 96–105 (5 figs.), F. WINTER discusses the paintings in one of the rooms of the "casa del citarista," which he thinks are derived from originals of the fourth century B.C. The painting representing Ares and Aphrodite (Helbig, *Wandgemälde* 323; *Ann. d. Ist.* 1875, tav. d'agg. B) is discussed in great detail. The seated sleeping servant is explained as Alectryon and the person looking in from the right, though regarded as an integral part of the original composition, is left unnamed. (See below, p. 481.) The chief reason for assigning the originals of these paintings to the fourth century B.C. is their resemblance to Attic sepulchral reliefs of that period.

The Gates of Hades.—On a "Megarean" bowl of black relief-ware in the British Museum is a representation of the Rape of Proserpine in two scenes, above ground and in Hades, which are separated by a stele marked ΕΥΞΕΒΩΞ. This represents the "Αἶδον πύλαι of classical and early Christian literature. (A. S. MURRAY, *J.H.S.* XXII, 1902, pp. 2–4; cut.)

Notes on Greek Painting and Vases.—In *R. Ét. Gr.* XIV, 1901, pp. 470–479 (1 fig.), H. LECHAT discusses the following articles, summaries of which have appeared in this JOURNAL: BLUEMNER, 'Die Gemälde des

Panānos am Throne des olympischen Zeus,' *Jb. Arch. I.* XV, 1900, pp. 136-144; E. POTTIER, 'Le Vase de Cléoménès,' *R. Arch.* 1900, ii, pp. 181-203; F. WINTER, 'Zu Euphronios,' *Jh. Oesterr. Arch. I.* III, 1900, pp. 121-132; F. B. TARBELL, 'A Signed Cylix by Duris, in Boston,' *Am. J. Arch.* IV, 1900, pp. 183-191; P. GARDNER, 'A New Pandora Vase,' *J.H.S.* XXI, 1901, pp. 1-9; L. DEUBNER, 'Ἐπαύλεια,' *Jb. Arch. I.* XV, 1900, pp. 144-154.

Studies of Greek Ceramics. — In *Gaz. B.-A.* 1902, pp. 19-36 (9 figs.), 221-238 (8 figs.), E. POTTIER reviews Hartwig's *Die griechischen Meister-schalen der Blüthezeit* and Furtwängler and Reichhold's *Griechische Vasen-malerei*, only one number of which has appeared. The review contains many suggestive remarks, but the points upon which Pottier lays the greatest stress are the uncertainty of the exact meaning of ἐποίησε, the probability that the signature is a factory mark rather than the personal signature of an artist, and the importance of the potter in comparison with the painter. The vase-painters were not original artists, but skilful adapters of the designs of the mural painters, sculptors, and other real artists.

INSCRIPTIONS

Inscription of an Attic Phratia. — In Ἐφ. Ἀρχ. 1901, pp. 157-162, P. KASTRIOTES publishes a list of names with the heading Διὸς Φρατρίος Ἀθηνῶς Φρα[τρίας]. The inscription is in the epigraphical museum at Athens. The characters are those of the early part of the fourth century B.C. The names are familiar Attic names.

An Attic Decree Restored. — In *B.C.H.* XXV, 1901, pp. 93-104, A. WILHELM republishes an Attic inscription in the Louvre. The stone was found near Cape Zoster on the site of Halae, and formed part of the Choiseul-Gouffier collection. It has been published several times, but with no satisfactory explanation, and Koehler (*C.I.A.* II, 571) has declined to attempt a restoration. Wilhelm reaches the following text: [E]ἰθήμεων ε[ῖ]πεν· ὅπως ἄ[ν] τὰ τε κοινὰ σᾶ | ἦι τοῖς δημόταις κα[ὶ] τὰς εἰθύναις δι[δο]ῦσιν οἱ δημαρχοὶ κα[ὶ] οἱ ταμίαι, δεδ[ό]χθαι τοῖς δημόταις [τὸς δημάρχους κ] | αἱ τὸς ταμίας τὸν λόγ[ον] τῶν λημμάτων | καὶ τῶν ἀναλωμάτων ἐ[μ]βάλλεν ἐς τή[ν] | κιβωτὸν κατὰ τὸν μῆ[ν] α ἕκαστον, ἐπε[ὶ] δὴ κ[α] | ἰ οἱ ἐπὶ Ναυσίγέ[νος] ἄρχοντες | α | ὑτ[ο]ῖ ἐθελονταὶ ἐμβά[λλ]οσι κατὰ μῆ[ν] α τ[ο]ῦ | λ | ὄγον· τὰς δὲ εἰθ[ύ]νας διδόναι | τῶι [ὑ]στέρῳ ἔπει πρὸ [τῷ Μεταγεινι]ῶνος μηνὸς ἐκ τῶν ἐκ [τῆς] κιβωτοῦ λόγ[ω]ν, ἐξ ἄλλων δὲ μῆ· στή[σαι] δὲ στήλην ἐν | τῇ ἀγορᾷ ἀναγρᾶ[ψαντας] τὸδε τὸ ψήφ[ισμα]· ἐξορκούτω [δὲ] ὁ δημαρχὸς τὸν εἰθ[ύ]νον καὶ τὸς πα[ρ]έδρους εἰθηνῆν κα[τὰ] τὸ ψήφισμα τὸ ἐν τῇ ἀγορᾷ ἀναγε[γ]ραμμένον· ἔαν δὲ [μὴ] ἐξορκώσῃ αὐτοῖς | καὶ μὴ ἐξέλωσι | τὴν εἰθηναν κατὰ | τὸδ[ε] τὸ [ψ]ή[φ]ι[σ]μα κ.τ.λ. It is therefore a decree of the deme of Halae, passed in the year 368-367 B.C., providing for the filing of a monthly statement of accounts by the demarchs and treasurers, and for annual εἰθνεῖν on the basis of these monthly balances.

An Inscription in Honor of Asandrus. — In the *Annual of the British School at Athens*, No. VII, Session 1900-01, pp. 156-162 (facsimile), ADOLF WILHELM shows that an inscription of the Finlay collection (*C.I.A.* II, 410 and IV, 2, p. 109, 410) now belonging to the British School at Athens, and an inscription in the British Museum (*C.I.G.* 105, *Greek Inscriptions in the British Museum*, xiv, *C.I.A.* II, 234, Dittenberger, *Sylloge*², 166) are parts of one inscription in honor of Asandrus, son of the Agathon who was made

governor of Babylon by Alexander the Great in 331-330 B.C. The equestrian statue mentioned was to be set up by Asandrus himself and the inscription was cut at his expense.

The Worship of Bendis at the Peiraeus.—In *Jh. Oesterr. Arch. I. V*, 1902, pp. 127-139, A. WILHELM publishes an inscription from the Peiraeus (mentioned *Jh. Oesterr. Arch. I.* 1898, Beiblatt, p. 46; *Rhein. Mus.* 1900, p. 503; Hartwig, *Bendis*, p. 27) relating to the procession of the Thracians in honor of Bendis. The archon, Polystratus, is unknown, but must be assigned to about the middle of the third century B.C. The temple of Bendis was near that of Asclepius, on the slope of Munichia. Many details are discussed.

Two Decrees of the Alabandians.—In 'Εφ. 'Αρχ. 1901, pp. 147-158, ADOLF WILHELM republishes with new readings the inscription *C.I.G. II*, p. 1018, 2152^b and the one published by Papabasileios, 'Εφ. 'Αρχ. 1901, p. 90 (cf. *Am. J. Arch.* 1901, p. 71). The first was found at Carystus, the second at Chalcis. Both are decrees of the Alabandians. The second grants rights not to any class of Alabandians, but to citizens of some other place, probably Chalcis. The first inscription was formerly supposed to be a decree of the Alexandrians of the Troad. Both are of Roman times.

The Troezenian Inscription concerning Damages.—In *Sitzb. Sächs. Ges.* LIII, 1901, ii, pp. 21-30, R. MEISTER republishes and discusses the inscription from Troezen discovered and first published by PH. E. LEGRAND, *B.C.H.* XXIV, p. 190, No. 5. Meister gives text, translation, and grammatical and exegetical commentary. His results differ little from Legrand's. The subject of the decree is the manner in which those persons shall be reimbursed who have suffered loss in conflicts between Troezen and some other town with which peace had now been made.

The Polyzalus Inscription at Delphi.—At the January meeting of the Berlin Arch. Gesellsch. O. Schroeder proposed to restore the first line of the Polyzalus inscription, which is certainly the dedication of a quadriga, whether that of the extant charioteer or not, as *μῆνμα κασιγνήτοιο Πολύζαλος μ' ἀνέθηκεν*. The name being in an erasure, it is clear that Polyzalus was not the originator of the gift, but inherited it through the death of Gelo in 478 B.C., just before it was to have been set up. (*Arch. Anz.* 1902, 1, pp. 11-12.)

Delphic Accounts and Chronology.—In *B.C.H.* XXIV, 1900, pp. 463-509 (1 pl.; 1 fig.), E. BOURGUET continues his publication of 'Inscriptions de Delphes' (see *Am. J. Arch.* 1901, p. 344), discussing 'Les Comptes sous Caphis et sous Theon.—La Chronologie delphique sous Alexandre.' The two texts belong to the same series as the accounts of the *ταμίαι* under Damochares and Dion already published, and Bourguet promises a study of the financial administration of the sanctuary during the entire period. Both texts cover the entire year, and show the balance on hand at the beginning, the receipts and expenditures, and the new balance for both autumn and spring sessions of the Amphictyonic Council. Under Theon, however, the record is much fuller, though the stone is by no means so complete. The latter part of the article is a discussion of the chronology of the Delphian archons of the time of Alexander, with special reference to the dates proposed by Homolle (*B.C.H.* XXII, 1898, pp. 612-617; cf. *Am. J. Arch.* IV, 1900, p. 533). Bourguet's arrangement is based upon a minute examination of the lists of the hieromnemons, of which he gives a table covering the

archonships of Dion, Lykinos, Bathyllos, Caphis, Charixenos, and Theon. Of especial importance are the names of the Thessalians and the representatives of Alexander. Starting with Damoxenos in 338-37, he gives the following list: 337-36, —; 336-35, Dion; 335-34, Etymonidas; 334-33, Thebagoras; 333-32, Lykinos; 332-31, Bathyllos; 331-30, Caphis; 330-29, Charixenos; 329-28, —; 328-27, Theon; 327-26, Eribas; 326-25, Pleiston; 325-24, Euarchidas; 324-23, Eueritos; 319-18, Maimalos. From Eueritos to Maimalos the list is already assured. The vacant year 337-36 is to be assigned to Ornichidas, and 329-28 to Cleodamas or Phainis. In conclusion three fragments are published, to which the preceding investigation permits approximate dates to be assigned.

Renting of Temple Property at Delphi. — TH. HOMOLLE publishes in *B.C.H.* XXV, 1901, pp. 105-142 (1 pl.), a series of fragmentary inscriptions relating to the receipts from the temple properties at Delphi. One of these is the lost inscription originally copied by Dodwell (*C.I.G.* 1690; *S.G.D.I.* 2562), which has recently been recovered, and another is almost identical with it, so that a complete text is easily obtained. This is supplemented by other fragments, and it is shown that we have to do with documents of the archonships of Theolytos and Caphis. It seems necessary to modify the list of archons proposed by Bourguet (see above), by placing Theolytos in 332-31 B.C., Lykinos and Bathyllos in the preceding years, and omitting Thebagoras, or Thebagoras and Etymonidas, if the two cannot be separated. The inscriptions give only the names of the lessees, and the rent paid for each piece of land or house. The properties are designated by the names of the original owners or perhaps of the first lessees. A comparison with Delian inscriptions shows that the rents at Delphi were much lower, and it seems probable that we have only a partial list of the tenants of the god. Among the lessees are two cities, Echinus and Larisa, which seem to have rented houses for the accommodation of their pilgrims. Homolle publishes a Delphian inscription showing that the Thebans also had such a house.

Unpublished Thessalian Inscriptions. — In 'Εφ. 'Αρχ. 1901, pp. 123-144, G. D. ZEKIDES publishes thirty-one inscriptions, chiefly from Larisa. They are for the most part fragmentary and unimportant. Several are from tombstones. The longest inscription is a deposition concerning some land, and contains a number of new names of places. Another relatively long fragment (thirty-two lines) has to do with a lawsuit and mentions the theatre. Several new names occur in these inscriptions.

Apollo Kendrisos and Apollo Patrous in Thrace. — In *R. Ét. Gr.* XV, 1902, pp. 32-36, TH. REINACH publishes an inscription from Philippopolis: 'Απόλλωνι | Κενδρισῶ Βίθυς | Κότνος ἱερεὺς | Συρίας Θεᾶς | δῶρον ἀνέθηκεν. This proves the existence of a Thracian deity, Kendrisos, identified with Apollo, whose festival has been known from inscriptions on coins. Other inscriptions published are a tombstone and a dedication of a statue of Hadrian from Philippopolis. In the dedication to Gordian and his wife (Dumont-Homolle, No. 61, p. 346) the name of the propraetor may be restored Π. Ναματιανοῦ. The epigram Dumont-Homolle No. 62, 20, p. 362 (Cougny, *Anth. Pal.* III, p. 587, No. 128^b) is published from new squeezes. In l. 3, πατρῶος is an epithet of Apollo. The copies and squeezes of these inscriptions were sent by Mr. Tacchella, of the museum of Philippopolis.

Note on a Thracian Inscription.—In *B.C.H.* XXIV, 1900, p. 574, G. SEURE adds a note to his article on the continental possessions of the Samothracian Deities (cf. *B.C.H.* XXIV, 1900, pp. 147–159; *Am. J. Arch.* V, 1901, p. 337). The inscription published by Papageorgiou is the same as the second published by Seure. The stone is now in the Museum at Constantinople. The exact place of discovery, the dimensions, and the forms of the letters are given.

The Oldest Parian Inscription.—In *Jh. Oesterr. Arch.* I. V, 1902, pp. 9–13, F. HILLER V. GAERTRINGEN publishes in facsimile a fragmentary inscription from Paros, which he reads with conjectural restorations: [Ἀφροδίτης μ' Ἐ[λαπιδος ἔγραφε] Εὐπάλω[ι χά]ριν φέ[ρω]ν. The rough breathing has the form β and the inscription may be assigned to the seventh century B.C.

The Marmor Parium and Archilochus.—In *B. M. Soc. Ant. Fr.* 1901, pp. 138–141, A. HAUETTE calls attention to the fact that the mention of Archilochus in line 48 of the Marmor Parium is the result of a restoration. The restorations heretofore proposed are impossible. He proposes ἀφ' οὗ [Ἀρχιλόχ]ο[ς τοῦ Τελεσευκλέους ὁ ποιητῆς ἐφάνη, but considers even this doubtful.

An Inscription from Tenos.—In *B.C.H.* XXIV, 1900, p. 614, HILLER VON GAERTRINGEN states that the inscription published by Latichew in *B.C.H.* VII, 1883, p. 247, and suspected by him to have come from Delos, is from the sanctuary of Poseidon on Tenos. The stone, which is now in Athens, shows that line 4 should be restored to read τὸ ἱερόν τοῦ Ποσειδῶνος καὶ τὰς Ἀμφιτέρας, etc.

Notes on Inscriptions.—In *B.C.H.* XXIV, 1900, pp. 524–531, E. DRAGOMIS publishes two 'Notes Épigraphiques.' I. 'Un Hermès Στροφαῖος en Crète,' deals with the inscription (*B.C.H.* XXIV, 1900, pp. 241–245; cf. *Am. J. Arch.* V, 1901, p. 342) from Crete which Demargne interpreted as a dedication to Cypris. A different division of the text shows that it is addressed to Hermes by Cypharis, son of Siphias. Hermes is here honored as στροφαῖος, and the heading should be read Ἑρμῇ Πυλοστρόφῳ. The ceremonies connected with the dedication of such a statue or altar at the door of a house are briefly discussed, and the concluding lines of the inscription interpreted as mentioning the usual offerings. II. Suggestions on the text and interpretation of the epitaph from Acraephiae published by Perdrizet (*B.C.H.* XXIV, 1900, pp. 70–74; cf. *Am. J. Arch.* V, 1901, p. 337).

GENERAL AND MISCELLANEOUS

Ancient Corinth.—In *Records of the Past* (Washington), I, 1902, pp. 33–44, 74–88, A. S. COOLEY gives the first connected description of the American excavations at Corinth. The article is illustrated with many photographs, cuts, and an elaborate plan. The importance of these excavations, the progress of which has been recorded in numerous reports in this JOURNAL, is made clearly evident.

Carpathus and Cimolus.—In the *Bulletin de la Société Royale Belge de Géographie* XXV, 1901, pp. 237–288, HENRY HAUTECŒUR describes the island of Carpathus, its geology, its products, and its inhabitants, giving a brief history of the island in ancient and modern times. *Ibid.* pp. 350–366, the same writer treats of the island of Cimolus. Both articles contain notes and observations on the antiquities of the islands.

The Zakro Sealings.— Nearly a hundred and fifty seal-types, comprising cult-scenes, monsters, animals, etc., from clay impressions found at Zakro, Crete, are published by D. G. HOGARTH in *J.H.S.* XXII, 1902, pp. 76-93; 5 pls.; 33 cuts. They are apparently contemporary with the Mycenaean and Vaphio burials and with Mycenaean Cnossus. The numerous variations of types had the practical purpose of individualizing the seals rather than an artistic motive. The great variety of winged figures suggests a native origin for this feature of archaic Greek art.

An Allusion to Mycenaean Script in Plutarch.— In *Cl. R.* 1902, p. 137, L. R. FARNELL thinks that Plutarch (*de genio Socratis*, C. 5, p. 575 E) refers to Mycenaean script when he mentions "a bronze tablet with letters of wonderful antiquity," which could not be read, but were "very like the Egyptian" letters, which was found in the tomb of Alcmenae near Haliartus in the fourth century B.C.

The Gong at Dodona.— The numerous proverbial and other references to the sounding bronze of Dodona appear to go back to two epochs. At first the sanctuary was enclosed only by a continuous row of votive tripods, through which a resonant vibration would pass from either end. Later, when a real wall was built, two columns at the entrance supported a small cauldron and a bronze figure holding a whip with metal tags, which struck the bowl when moved by the wind. The sound, originally prophylactic, came to be regarded as also oracular. All the details, whip, columns, etc., as well as the bronze, seem to have had a prophylactic meaning. (A. B. COOK, *J.H.S.* XXII, 1902, pp. 5-28; cut.)

Some Monuments at Delphi.— At the March meeting of the Berlin Archaeological Society, POMROW discussed the position and history of the monuments along the Sacred Way in the southeast corner of the *temenos* at Delphi. He puts the Corcyraean Bull, the Arcadian Heroes, Lysander and the Spartan Admirals, and the semicircle of Kings of Argos, along the northern or right side of the road on entering; the Wooden Horse, the Marathon monument, the Seven against Thebes, Amphiaras, and the Argive Epigoni along the south side. (*Arch. Anz.* 1902, pp. 14-20; plan.)

The Gorgons on the Omphalos.— In *Hermes*, XXXVII, 1902, 258-267 (6 figs.), F. STUDNICZKA shows by archaeological proofs that the reading in Euripides' *Ion* 224 is impossible. He proposes, with the assent of C. Robert, as a possible restoration of the passage:

στέμμασί γ' ἐνδύτόν, ἀμφὶ δὲ γοργῶν
(χρυσοφαίνων Διὸς οἰωνῶ.)

The gorgons have no place on or beside the omphalos.

Thymele and Skene.— In *Hermes*, XXXVII, 1902, pp. 249-257, W. DÖRRFELD replies to Bethe's article, 'Thymeliker und Skeniker,' *ibid.* XXXVI, pp. 597 ff., and explains *θυμέλη* as "foundation," especially the foundation of an altar. He shows how this meaning is applicable in all passages where the word occurs. In dramatic performances in ancient times the *σκηνή* served as background, and in other performances those who took part were grouped on or about the *θυμέλη*, hence the performers and the performances were called *scenic* and *thymelic*.

The Silver Rhyton from Tarentum.— In *Jh. Oesterr. Arch.* I. V, 1902, pp. 112-123 (2 pls.; 10 figs.), A. PUSCHI publishes the silver rhyton

in Trieste (*R. Arch.* 1901, II, pp. 153 ff.; cf. *Am. J. Arch.* 1902, p. 215) and a bronze oenochoe, also from Tarentum and now in Trieste, adorned with vines, a palmette, and griffins finely executed in relief. Other vessels from Tarentum are described. The rhyton from Kertsch, now in St. Petersburg, and the similar one in Sophia are published. The style of the Tarentine rhyton is regarded as Attic, and the interpretation of the relief by reference to any local Tarentine myth is rejected. FRANZ WINTER (*ibid.* pp. 124-127) connects the Tarentine rhyton with the Ionic school of the second half of the fifth century B.C.

Genre Subjects in Early Greek Terra-cottas. — In *B.C.H.* XXIV, 1900, pp. 510-523 (3 pls.; 3 figs.), E. POTTIER discusses genre subjects in archaic terra-cotta figurines. He first describes nine examples acquired in recent years by the Louvre. Two of these are groups; one from Cyprus, of a very primitive character, shows a number of women washing at a trough; the other four women kneading bread to the music of a double flute. The others are single figures. Nos. 3 and 4 are women cooking; No. 5, a woman preparing grain in a mortar; No. 6, a woman carrying a child; No. 7, a man playing on the lyre; No. 8, a man writing on a tablet; and No. 9, a kneeling woman rubbing the grain on a slab. The first group belongs to the Hissarlik period, and closely resembles the groups attached to many early Cypriote vases. Such subjects are chosen in the belief that the life of the dead is in need of comforts which these figures can supply. No such groups have been found in continental Greece until the Dorian period. The group with the flute-player, and also the single figures, belong to the sixth or perhaps the first half of the fifth century B.C. Similar genre figures are common in Egyptian tombs of the fifth and sixth dynasties, but these are too early to have influenced the Greeks. It is possible, however, that, though they were no longer used with a religious meaning in the tombs, they were still common in Egyptian houses, and thus became known to the Greeks. Certainly many of the Greek figures, like No. 9, are obvious imitations of Egyptian types. With the introduction of more spiritual conceptions as to the future life in the fifth century these figures gradually pass away, and when they reappear in later times it is merely as picturesque or comic subjects without any religious significance.

Mirrors with Reliefs. — The mirror published by de Ridder (*Mon. Mém. Acad. Insc.* IV, p. 100) represents not Eros, but Nike, who had just finished a game with astragali, two of which are lying on the ground at her side. The woman crouching on one knee is a type found on vases of the fifth century, and the astragal player seems also an invention of the same period; perhaps the original is to be found in the Νέκυια of Polygnotus. This mirror is also of interest because of the care with which the artist has represented the ground of the court in which the goddess is supposed to be playing. Such indications of the surroundings are rare in Greek art before the Alexandrian period, but a small group of mirrors with decoration in relief forms an exception. One of these is the double cover (Ἐφ. Ἀρχ. 1893, pl. 15) with Aphrodite on the swan on one side, and a goddess on horseback riding over the sea on the other. Another example is a double cover with Dionysus and Ariadne on one side, and on the other Aphrodite with Eros on her lap. These are the only known mirrors with double covers, and both were found in Eretria. The beauty of the reliefs makes it

hard to attribute them to an Eretrian workman, and the Athenian origin seems confirmed by their resemblance to a single cover found at Kaphiarapi in Attica. All show a strong likeness to the vases of the end of the fifth century, with scenes from the cycles of Aphrodite, Eros, and Dionysus, and must be dated in the same period. The museum at Athens also contains three other mirrors of a somewhat later date, decorated with applied reliefs (*reliefs découpés*). The emblema of one is a seated mellephebic Eros, on another is represented Aphrodite teaching Eros to draw his bow, and the third has a conventional group of a seated man and woman on either side of a herm. This mirror is remarkable for its size, as it measures 20 cm. in diameter. (P. PERDRIZET, *B.C.H.* XXIV, 1900, pp. 348-357; 4 pl.)

Letters of Fauvel.—In *B. M. Soc. Ant. Fr.* 1900, pp. 240-245, H. OMONT publishes extracts from letters written by Fauvel to Count Choiseul-Gouffier between 1787 and 1806. They are now in the Bibliothèque Nationale. They contain lists of sculptures shipped from Athens by Fauvel, and copies of several inscriptions published in Froehner's *Inscriptions grecques*. One extract contains severe criticism of the conduct of Lord Elgin and the English sailors in removing sculptures from the Parthenon and the Erechtheum.

The Sematography of the Greek Papyri.—The abbreviations used in the Greek papyri, especially the non-literary documents in the British Museum, from the Ptolemaic times down through the Roman and Byzantine periods, have been studied by F. W. G. FOAT, who concludes that the symbols were seldom or never borrowed from an arbitrary short-hand system, but were naturally developed from cursive writing, as that had itself come from uncial and epigraphic letters. (*J.H.S.* XXII, 1902, pp. 135-173.)

ITALY

ARCHITECTURE

Houses at Pompeii.—AUGUST MAU supplements his description of the excavation of the Temple of Venus Pompeiana (*Röm. Mith.* 1900, pp. 270 ff.) with that of a number of private houses in Reg. V. ins. 4-6. Some are of a considerable degree of importance, and their decorations are treated in detail with the help of half-tone illustrations. One contained, with a representation of Micon and Pero (cf. Helbig, 1376), a Latin epigram of seven lines, which Buecheler (*Rhein. Mus.* 1901, p. 156) and others have tried not very successfully to restore. (*Röm. Mith.* 1901, pp. 283-365; 8 figs.; 1 pl.)

A Monument of Elagabalus.—In *Röm. Mith.* 1901, pp. 275-282 (pl.), F. STUDNICZKA describes and discusses a pilaster-capital of marble in two pieces, one of which was discovered near the temple of Castor in the Roman Forum in 1870-1872 (see WISSOWA, *Ann. d. Ist.* 1883), the other amid the ruins of the Regia in 1899. The capital is richly decorated with emblematic figures, and is important as the only plastic memorial of the years 219-222 A.D., apart from coins and portraits of doubtful authenticity. It belonged to a bounding portico of the temple erected by the emperor, and now rests, the two parts reunited, on the foundation of the Arch of Augustus in the Forum.

SCULPTURE

Heads from the Baths of Caracalla.—In *Röm. Mith.* 1901, pp. 372–381 (2 figs.; 2 pls.), L. SAVIGNONI republishes in better form than in *Not. Scavi*, 1901, pp. 248 ff., two marble heads recently found in the Baths of Caracalla at Rome, one of Asclepius, the other of a youth. The former is probably from a Greek original in bronze of the first half of the fifth century. The latter is also a good copy of a Greek original of perhaps the middle of the fourth century, and might possibly be an Apollo. Both heads are now in the Museum of the Baths of Diocletian.

Hymenaeus on the Altar of Ostia.—KARL HADACZEK, in *Röm. Mith.* 1901, pp. 395–396, interprets the figure of the boy standing to the left of Venus on the Altar of Ostia (*Not. Scavi*, 1881, pl. 2; Helbig *Fuhrer* ² II, p. 206), and encircled by her left arm, as her son Hymenaeus, who holds the marriage-torch in his left hand, and in his right grasps a corner of Venus's mantle.

The Arch of Trajan at Beneventum.—In the *Transactions of the American Philological Association*, XXXII, 1901, pp. 43–63, ELMER T. MERRILL considers the interpretation of the reliefs of the Arch of Trajan in view of the articles by Petersen, Domaszewski, and Frothingham, as well as the works by earlier writers. The main points of the author's views are as follows. The main reliefs encircle the arch in three bands of four reliefs each, which proceed chronologically from left to right, and from the top downward. The main face of the arch is the one toward the city, and with it the interpretation should begin. The reliefs of the attica on this side show the departure of Trajan for the second Dacian War, those on the other side his reception by the gods of the Danube lands, and the erection of Dacia into a Roman province. The gate through which Trajan leaves the city is apparently the Porta Capena, represented with the adjacent aqueduct and the Temple of Honor and Valor. The river-gods in the last relief of the attica are probably the Tibiscus and the Alutus. Of the reliefs of the middle tier, the first depicts the colonization of Dacia by veterans from five of Trajan's legions, symbolized by the five eagles on the *uexillum* carried by the *uirtus legionum*. In the second relief Trajan is assuring the grain supplies of the city, and the welfare of the *tribus frumentariae*, who are represented by the three male figures. The wreathed Hercules is the *Hercules Pompeianus* of the temple on the site of S. Maria in Cosmedin. The reliefs of the lower tier refer to the eastern campaign. In the first, the *uota pro itu ac reditu*, the togated figure with the mural crown and the wreathed spear probably represents the veterans. The second relief depicts the entry of Trajan into Antioch, escorted by the governor of Syria, and the third the submission of the king of the Caucasus region. In this relief appears *Iuppiter Lapis*, as guardian of oaths. The last relief represents the rejection of Parthamasiris, of which only a brief account had arrived in time to be recorded in imaginary form on the arch. Of the reliefs of the arcade, one is the *congiarium*, where Roma is recommending to the emperor's bounty the *tribus*, depicted by the three women in mural crowns. In the other relief, of the imperial sacrifice, the *Populus* is represented by the youthful figure at the left of the bearded *Senatus*. Numerous other details are specified and supported by argument.

Mars Ultor on the Breastplate of the Augustus from Prima Porta.—In *B. M. Soc. Ant. Fr.* 1900, pp. 214-219, E. MICHON interprets the scene in the middle of the breastplate of the statue of Augustus from Prima Porta as a symbolic representation of the return of the standards lost by Crassus. The beardless figure receiving the standard is Mars Ultor. This god is usually bearded, because he was so represented in the temple erected by Augustus in 2 B.C. Here he is beardless, probably in imitation of the statue in the temple on the Capitol erected by Augustus in 20 B.C. The animal at his feet is a wolf.

Two Mithraic Reliefs.—In *R. Arch.* XL, 1902, pp. 1-13 (pl. i; 2 figs.), FRANZ CUMONT publishes a relief in Modena and a fragment in Mannheim. Both were found, apparently, in Rome. The Modena relief, of good workmanship and excellent preservation, probably belongs to the second century after Christ. Mithra is represented as a beautiful youth with hoofs for feet, wearing a lion's head upon his breast, and with a serpent twined about him. He is surrounded by the signs of the zodiac, and marks of the four chief winds occupy the corners of the slab. Mithra, the god of Time, is discussed in his relations to astronomical phenomena and to other gods. The second monument is carved on both sides. On the front is a small part of a representation of Mithra slaying the bull; on the back a fragment of the sacred banquet.

Dacians before Trajan.—The men in Dacian costume with their hands crossed behind their backs, who appear in the final scene of the first Dacian War on the column of Trajan (Cichorius, pl. liv, Fröhner, pl. 103), are Dacian envoys, who, according to Dio, LXVIII, 10, 1, had their hands joined in the manner of captives. (E. GROAG, *Jh. Oesterr. Arch.* I. V, 1902, Beiblatt, coll. 39-42.)

The Slave with a Lantern.—In *R. Arch.* XL, 1902, pp. 392-397 (3 figs.), J. DÉCHELETTE publishes a statuette in the National Museum at Rome. A child slave is represented who has fallen asleep as he sits holding a lantern. The original was probably Alexandrian. Two other types of a slave with a lantern are a small bronze from Herculaneum and some moulds and the like from the factory of Lezoux. In both of these the slave is full grown, though still young. The bronze from Herculaneum represents him asleep, the Gallo-Roman pottery as awake and alert.

The Head of Constantine from Nisch.—The head of Constantine found at Nisch (*Am. J. Arch.* 1902, p. 56) is published by E. MICHON, in *B. M. Soc. Ant. Fr.* 1901, 124-130 (pl.), who expresses himself in favor of the identification with Constantine. The cameo in Belgrade, ascribed by Furtwängler, *Die Antiken Gemmen*, III, p. 456, to the time of Augustus, may belong rather to Constantine.

Equestrian Divinities.—In *R. Arch.* XL, 1902, pp. 227-238 (pl. viii; 11 figs.), S. REINACH publishes two bronze statuettes from Alexandretta, now belonging to the British Museum, which represent a male and a female divinity each seated on a horse. These deities are probably Asiatic. The work is not earlier than the second century after Christ. A marble group from Sandiklu, in Asia Minor, representing a male and a female divinity seated on one horse, and nine representations of Epona are published.

Portrait of the Emperor Julian.—In *R. Arch.* XL, 1902, pp. 288-291 (5 figs.), S. REINACH publishes, from *L'Éclair* of February 14, 1902, the

substance of a discourse by E. BABELON before the Académie des Inscriptions. In this an attempt is made to prove that the so-called Julian of the Louvre is really a portrait of Julian, and that the bust at Acerenza is not. Reinach maintains the opposite view.

PAINTING

Alectryon.—In *Hermes*, XXXVII, 1902, pp. 318-320, C. ROBERT explains as Alectryon the male figure visible in the doorway represented in the Pompeian painting of the amour of Ares and Aphrodite published by Mau, *Röm. Mitth.* XVI, 1901, p. 304, fig. 3. (See above, p. 471.)

Ancient Book Illustration.—A little-known collection of pseudo-antique Latin medical writings dating from the fourth to the sixth century after Christ, of which more than a dozen mediaeval copies are known, has colored illustrations, both text-pictures and less technical full-page compositions, which are quite different from the work proper to the period in which the collection was made and evidently preserve the genuine ancient style of book-illustration. There are no elaborate initials or borders, the backgrounds are natural scenes or atmospheric tints, and the colors as a whole subdued and harmonious. Portraits and views of places have a formal architectural setting. The original collection was probably west-Roman, but followed eastern compositions in many parts, both of text and of illustrations. (G. SWARZENSKI, *Jb. Arch. I.* XVII, 1902, pp. 45-53; cut.)

INSCRIPTIONS

The Early Inscription in the Forum.—In the Proceedings of the *Soc. Ant.* XVIII, No. 2, pp. 392-409, E. C. CLARK discusses the "niger lapis" and other early remains found in the Forum, with especial attention to the archaic inscription. He regards the script as 'Graeco-Etruscan,' and ascribes the same character to the marks on the 'Servian' wall, which he maintains is pre-republican. He suggests that the inscription is "a surviving remnant of the tables of stone set up at the beginning of the Republic, usually dated 509 B.C." by the pontifex Papirius.

GIACOMO TROPEA has published a fourth pamphlet on the discussions relating to the archaic inscription of the Forum (*La Stele arcaica del Foro Romano, Cronaca della discussione, Ottobre, 1900-Agosto, 1901*, Messina, 1901). In this he discusses the numerous articles on the inscription which appeared within the time mentioned. A summary of this pamphlet and of a monograph on the inscription by A. LUDWIG (privately printed, Prague, 1901), is given by KELLER, *Berl. Phil. W.* February 15, 1902.

Lex de Imperio Vespasiani.—Scott, Foresman & Company of Chicago have published as the first of their series of *Dissertationes Americanae*, a dissertation entitled *Lex de Imperio Vespasiani* by FRED B. R. HELLEMS, who gives text and translation of the bronze inscription in the Capitoline Museum (*C.I.L.* VI, 930), discusses the opinions of various scholars, and concludes that the law conferred the *imperium proconsulare* as well as the *tribunicia potestas*. The date assigned is early in January, 70 A.D.

The Praetor L. Cornelius Pusio.—In the *Revue des Études Anciennes*, IV, 1902, pp. 145-147, H. DESSAU discusses an inscription published in *B. Ac. Hist.* XXXIX, p. 308: *Martiali | L. Corneli | Pusionis | ser . . .*. Another inscription (*Röm. Mitth.* 1892, p. 199; *Not. Scavi*, 1893, p. 194) mentions L.

Cornelius Pusio, whose portrait is also preserved (*Röm. Mith.* 1892, pl. vi). He was a Spaniard of eminence. An inscription from Ampurius, published *B. Ac. Hist.* XXXVI, p. 497, reads: *Appio Claudio | Pul.* This refers to the Appius Claudius Pulcher, who was governor of Spain after his consulship of 38 B.C.

A Latin Graffito at Delos.—In the *Revue des Études Anciennes*, IV, 1902, pp. 88–89, P. PERDRIZET discusses a *graffito* discovered by Couve at Delos and published by Rostovtsew (*B.C.H.* 1896, p. 392): *Valeri, Nerius uneo igni sua, Augias*. Delos was destroyed in 87 B.C. The word *unio* (here *unéo*) was invented between 112 and 106 B.C. (Pliny, *H.N.* IX, 59). Hence the *graffito* is dated within about twenty years.

Inscriptions from Bulgaria.—In *B. M. Soc. Ant. Fr. (Mémoires, LX, 1899, published in 1901)*, pp. 339–381, L. POINSSOT discusses inscriptions from Bulgaria. One from Arcer (Moesia Superior) is a dedication to Jupiter Dolichenus, published *R. Arch.* 1900, i, p. 418. New readings add little to the interpretation. A second inscription from Arcer is a dedication to Hercules Invictus. This form of Hercules is a god of healing, no doubt derived from a local deity. Such inscriptions are found especially where Roman legions were posted. This Hercules is found associated with Esculapius. Perhaps his cult has some connection with the cult of Mithras, and it may have gained popularity in the early third century as a form of flattery of Septimius Severus. It seems to be a good example of syncretism. Other inscriptions published are dedications from Kutlovitsa (Moesia Inferior), Gaoureni (Moesia Inferior), Orechovitsa and Nicup (Moesia Inferior). From Nicup comes an inscribed boundary stone which marked the boundary of Thrace and Moesia. It is dated under Trajan, 136 A.D. A fragment of an inscription on a triumphal arch comes from Gicen (Moesia Inferior). Most of these inscriptions are new.

COINS

Coins with the Inscription 'Constantiniana Dafne.'—In *B. M. Soc. Ant. Fr. (Mémoires, LX, 1899, published in 1901)*, pp. 279–288, JULES MAURICE shows that the coins of Constantine with the inscription *Constantiniana Dafne* on the reverse belong to the years 327–329, A.D. and that the Dafne mentioned was a fortified place at the confluence of the Ardiscus (Ardschich) and the Danube.

The Date of Constantine's Imperial Title.—In *B. M. Soc. Ant. Fr.* 1900, pp. 314–317, J. MAURICE, by examining the bronze coins of Antioch, Rome, Tarragona, and London, finds support for the statement in the *Panegyric* of Eumenius that Constantine received the title of emperor at his marriage, March 31, 307 A.D. The relations of Constantine to the other *Augusti* are briefly discussed.

GENERAL AND MISCELLANEOUS

The Pomerium and Roma Quadrata.—In the *American Journal of Philology*, XXII, 1901, pp. 420–425, S. B. PLATNER discusses the references to Roma Quadrata and concludes that "the real pomerium of the Palatine city ran within the line of fortification, and marked the boundary of Roma Quadrata."

The Eneolithic Period in Italy.—In *B. Paletn. It.* 1902, pp. 5–43 (3 figs.), G. A. COLINI continues his treatment of the eneolithic period in Italy.

It is shown that the custom of coloring the body after death was common in the eneolithic as in the neolithic period. Coloring substances are found in the tombs and clay stamps for the production of definite patterns. It is evident that the body was buried clothed, and it is probable that there was a sort of cloak fastened on the right shoulder. A large part of this article is devoted to the discussion of ornaments and utensils of shell, which are found in great abundance. Some of the shells show that the European peoples of this period had communication with the East.

The Rock-cut Figures of the Maritime Alps.—In *B. Paletn. It.* 1901, pp. 217–259 (73 figs.), A. ISSEL describes and discusses the rude figures cut in the rocks of the Maritime Alps, in the Valle d' Inferno and the Valle di Fontanalba. The figures represent implements of various sorts, especially those of an agricultural nature, heads of cattle, horns, animals, geometrical designs, and human beings. After rehearsing various theories as to the origin and meaning of these figures, the writer arrives at the following conclusions: 1. That they were produced at a very early period, when, however, the use of metals was known, possibly the first age of bronze. 2. That they are due to an agricultural and pastoral people. 3. That some of the figures have a symbolical meaning. 4. That the people lived in the lower and more fertile valleys. 5. That no foreign animal is represented. 6. That the figures were regarded as important and worthy of preservation, and had possibly a religious or political meaning. 7. That the style is similar to that of figures on megalithic monuments. 8. That they are not sepulchral inscriptions. The following hypotheses are suggested as worthy of consideration. *a.* That they were intended to perpetuate the memory of a mysterious cult or of sacrifices offered to the divinity. *b.* That they were intended to preserve the record of memorable events. *c.* That they are boundary marks of tribes or individuals.

Montefortino and Ornavasso.—In *R. Arch.* XL, 1902, pp. 245–283 (35 figs.), JOSEPH DÉCHELETTE discusses the views of E. Brizio (*Mon. Antichi*, IX, 1901, pp. 617–792; cf. *Am. J. Arch.* 1901, p. 479) concerning the civilization of the Gauls in Italy. Déchelette finds that the necropolis at Montefortino is not earlier than the third century B.C. and shows greater influence of Etruscan civilization than do other Gallic remains in Italy. The tombs at Ornavasso, near the Lago Maggiore, dated by coins from about 200 B.C. to 80 A.D., show the characteristics of the second and third La Tène periods and prove that Brizio is wrong in asserting that Gallic civilization was from the beginning derived in great measure from Etruria.

Criticism of Work at Pompeii.—In *Rend. Acc. Lincei*, 1901, pp. 375–390, E. SOGLIANO reviews and criticises the work of Fiorelli, Ruggiero, and De Petra at Pompeii. He regrets especially that the government does not own all the land within the walls and for some distance outside. The refuse from the excavations moreover should have been deposited at a greater distance. The following suggestions are made for future work: The origin of the town should be determined by excavation of the pre-Roman necropolis beyond the Roman tombs outside the Herculanean gate. Similar excavations should be carried on in the valley of the Sarno. Important topographical questions—*e.g.* the direction of the *viae publicae*—should be answered by excavation at and near the gates. The ancient harbor should be sought and studied, the condition of the whole region after the eruption should be

determined, and finally an exact archaeological map of the territory surrounding Vesuvius should be constructed.

Ancient House-heating.—In his recent *Altömische Heizungen*, O. Krell shows that the ancients had their houses warmed, though not often by hypocausts, which were rather for drying. The portable charcoal braziers were capable of warming ordinary rooms without danger to health, and were used even in the baths of Pompeii. The book was discussed by P. GRAEF and F. DAHM at the January meeting of the Berlin Arch. Society. (*Arch. Anz.* 1902, pp. 10-11.)

J. G. Thalnitscher's Antiquitates Labacenses.—In *Jh. Oesterr. Arch.* I. V, 1902, Beiblatt, coll. 7-32 (3 figs.), A. v. PREMERSTEIN gives, with comments, extracts from the manuscript notes of Johann Gregor Thalnitscher of Thalberg (1655-1719) on the Roman remains of his native Laibach. Parts of these notes were used in *C.I.L.* III.

An Etruscan Hair-pin.—E. CAETANI LOVATELLI describes in *Röm. Mitth.* 1901, pp. 382-390 (2 figs.) a bronze hair-pin surmounted by a nearly nude figure of Venus, who rests her right arm upon an Ionic column, and inscribed in Etruscan characters *suθina*. It was found in or before 1871 in an Etruscan tomb near Bolsena, and is now in the Archaeological Museum at Florence. The author adds some remarks on other objects of the same sort, and on their use in antiquity.

Fragments of 'Campana' Reliefs.—In *Jh. Oesterr. Arch.* I. V, 1902, pp. 151-152 (2 figs.), O. BENNDORF publishes two fragments of terra-cotta reliefs now in Vienna. One is from a representation of the infant Zeus and the corybantes, the other from the combat of Heracles and the hydra. Both are fine work and differ from the previously known representations of the same scenes.

A Roman Standard.—In *B. M. Soc. Ant. Fr.* 1901, pp. 168-171 (pl.), E. J. SELTMAN publishes a Roman standard, found in England and formerly in the Forman collection. With it was a folding chair of iron. The standard contains a medal of Nero, so fastened as to be removable, perhaps in order that the medallions could be changed with a change of emperors. Standard and chair may have been lost in the battle with Boadicea in 63 A.D.

An Ancient Map.—In *Jh. Oesterr. Arch.* I. V, 1902, pp. 20-96 (11 figs.), W. KUBITSCHKE discusses in detail the *Itinerarium Antonini*, the *Tabula Peutingeriana*, and the Ravenna *Cosmographia* compiled about 700 A.D. He finds that they are all ultimately derived from a road map made probably under Caracalla.

FRANCE

The Roman Villas of Martres-Tolosanes.—The first excavations in the plain of Martres-Tolosanes were in 1632, and sporadic excavations were carried on at various later times. In the years 1897-1899 the ruins were systematically excavated, and four villas, two *vici*, and some other structures were laid bare. The most important is the great villa of Chiragan. The results are now published by the Académie des Inscriptions et Belles-Lettres. The ruins, their construction, their decorative and other sculptures are described and illustrated. They date from the time of Augustus to that of Theodosius, and are of the greatest importance for the understanding of the life and art of that long period. Among the portrait busts, all of which are

contemporaneous with the persons represented, is one of Augustus, at the age of 37, with a wreath of oak; four of Trajan; one of Hadrian at the age of about 50; one of Antoninus at about 52 years of age; two of Marcus Aurelius; two of Annus Verus (?); two of Commodus (?); one of Sabina, Hadrian's wife; four of Septimius Severus; one of Pupienus; one of Gordianus III; one of Gallienus(?); and one of Salonina, wife of Gallienus(?). Some of these are unusually fine. Other portraits are numerous. The reliefs and other decorative sculptures, though fragmentary, are of great interest. Complete lists of all objects found, including pottery, coins, and miscellaneous objects, are given. [LÉON JOULIN, *Les Établissements Gallo-Romains de la plaine de Martres-Tolosanes*. Extrait des Mémoires présentés par divers savants à l'Académie des Inscriptions et Belles-Lettres, 1^{re} série, Tome XI, 1^{re} partie. Paris, 1900, C. Klincksieck. 300 pp.; 25 pls.; 27 plans. 18.80 fr.]

Ancient Statues found in France.—In *B. M. Soc. Ant. Fr.* (*Mémoires*, LX, 1899, published in 1901), pp. 79-173 (2 pls.; 5 figs.), E. MICHON gives the history of some of the ancient statues discovered in France and now in the Louvre. The article is chiefly devoted to the cessions to the Louvre from the cities of Arles, Nîmes, and Vienne in 1822. Numerous documents are published. In *B. M. Soc. Ant. Fr.* 1901, pp. 300-310 (2 pls.), the same scholar calls attention to the male statue and the group of a mother and daughters found at Apt, and now at Chatsworth House, published by FURTWÄNGLER, *J.H.S.* 1901, pls. xiv and xv.

The Walls of Paris.—In the *Revue des Études Anciennes*, IV, 1902, pp. 41-45, C. JULLIAN cites texts showing that Paris did not, as has been said, remain unfortified until the fifth century. Paris was the natural place for a fortification and was doubtless fortified at an early date.

The Residence of Julian at Paris.—In *C. R. Acad. Insc.* 1902, pp. 14-17, C. JULLIAN shows that the ruins of the hôtel Cluny are not those of the palace of Julian, which was on the island in the Seine, the original city of Paris. The ruins are those of a bath, and were probably already ruins in the fourth century.

Gallic Terra-cottas.—In *B. M. Soc. Ant. Fr.* (*Mémoires*, LX, 1899, published in 1901), pp. 189-272 (6 pls.), A. BLANCHET publishes a supplement to his 'Étude sur les figurines de terre cuite de la Gaule romaine' (*ibid.* LI, 1891, pp. 65-224). The technique, the origin of the types, the centres of manufacture, and the epoch of manufacture are discussed. A description of the figurines and an inventory by place of discovery and by the museums are added. The most interesting part of the discussion concerns the figurines of Cologne and their makers. Vindex of Cologne belongs apparently to about the end of the third century after Christ.

A Gallic Bronze.—In *B. M. Soc. Ant. Fr.* 1901, pp. 160-165 (3 figs.), A. BLANCHET publishes a bronze dagger-handle in the museum of Issoudun (Indre). It is of rude Gallic workmanship and represents the upper half of a man, who wears a large *torques* about his neck, and holds in his hands before his breast a curved object, probably a *maniaca*. Gallic coins and other objects are cited in comparison.

Celtic Bronzes at Châteauroux.—In the museum at Châteauroux (Indre) are some pieces of the top of a *situla* found at Levroux. They are adorned with two figures of animals, one of which is certainly a stag, and

several helmeted human heads. The hind legs of the stags are continued forward toward the four feet. Horses are similarly represented on Sequanian coins. Other bronze objects in the same museum are probably parts of helmets. (L'Abbé H. BREUIL, *R. Arch.* XL, 1902, pp. 328-331; 4 figs.)

The Earliest Gallic Religion.—In the *Revue des Études Anciennes*, IV, 1902, pp. 101-114, CAMILLE JULLIAN, in the fourteenth instalment of his 'Notes Gallo-romaines' discusses the early Gallic religion, especially Mars, Mercury, and Teutates.

Gallo-Roman Astrology.—In the *Revue des Études Anciennes*, IV, 1902, pp. 115-141, H. DE LA VILLE DE MIRMONT begins a discussion of astrology among the Gallo-romans. He finds that astrology had no place in druidism, and that the Gallo-romans derived it from Greece and Rome.

Gallic Altar to Serapis.—In the *Revue des Études Anciennes*, IV, 1902, pp. 47-52 (3 figs.), G. GASSIES reads the inscription on the altar at Melun (*C.I.L.* XIII, No. 3010), (*M*)onimus . . . tr (?) Serap[is] d(eo) v(otum) s(olvit) l(ibens) m(erito). He interprets the reliefs on the altar as Serapis, Isis-Hygieia, Apollo-Harpocrates, Hercules, and Venus.

Ancient Axes.—In *R. Arch.* XL, 1902, pp. 34-40 (17 figs.), the Abbé BREUIL describes some axe-heads, fifty-eight in number, found years ago at St. Étienne de Brillouet (Vendée). Fifty-five of these are in the collection of Count R. de Rochebrune, at Fontenay. Some of them are plain, others decorated with raised lines. Some are new, a few much worn.

AFRICA

The Worship of Saturn in Africa.—In *B. M. Soc. Ant. Fr.* 1900, pp. 132-137 (3 figs.), A. HÉRON DE VILLEFOSSE publishes three stelae from Africa. The first, from Sidi-ben-Hassem, near Tunis has the inscription: *S(aturno) Aug(usto) s(acrum). D(ecimus) Larnius Saturninus, sacerdos dei, rotum solv[it] libe(n)s animo.* The two others, from Djebba, near Thibar, Tunisia, have no inscriptions, but bear reliefs representing loaves of bread, bucrania, and other symbolic offerings. The ruined temple at Djebba was probably a temple of Saturn.

Tablets inscribed with Curses.—In *B. M. Soc. Ant. Fr.* 1901, pp. 326-334 (four facsimiles), A. HÉRON DE VILLEFOSSE publishes three lead *tabulae execrationum* from Hadrumetum. The first was discussed by the writer in *C. R. Acad. Insc.* 1892, p. 226. It is directed against a driver in the chariot races. The second is similar, but fragmentary. The third is a love charm. The tablets were found in 1892 and 1893 and are now in the Louvre.

Bacchic Panthers.—In *R. Arch.* XL, 1902, pp. 332-335 (1 fig.), Dr. CARTON discusses a relief found in Tunisia, near the ruins of Colonia Thuburnica. Two female panthers stand facing each other. Between them is a vase from which grows a plant. Vine leaves grow from the tails of the panthers. The leaves may be carved here purely for decorative purposes, but in their origin they doubtless go back to Bacchic representations.

Judaizing Pagans.—In *R. Arch.* XL, 1902, pp. 208-226, PAUL MONCEAUX discusses several Latin inscriptions from Africa, especially a lament of some parents over the loss of two children. This inscription, which was found at Henchir-Djouana, contains expressions which show Jewish influence and acquaintance with the Old Testament, but do not show that the

authors were Jews. Probably they were pagans influenced by Jewish doctrines.

Saturninus and the Odeum at Carthage.—In *B. M. Soc. Ant. Fr.* 1900, pp. 348–351, P. MONCEAU publishes an inscription: *Odeum. G|um tollit | Satur . . .* which might seem to indicate that Vigellius Saturninus built the odeum in his proconsulship. But he was proconsul in 180–181 A.D., and the odeum was new about 212 A.D. when Tertullian's *Scorpiace* was written. *Ibid.* 1901, p. 72, R. CAGNAT says that renewed examination of the stone shows that the letter after the R cannot have been N, and the restoration *Saturninus* is impossible.

Unpublished Inscriptions from Roman Africa.—In 1731–1733 Christian Gottlieb Ludwig travelled in Roman Africa. He copied fifty-two Latin inscriptions, forty of which are included (from other sources) in *C.I.L.* Some of these can be corrected by Ludwig's copy. These corrections are suggested and the twelve hitherto unknown inscriptions are published by O. FIEBIGER, *Jh. Oesterr. Arch. I. V*, 1902, Beiblatt, coll. 41–52.

GREAT BRITAIN

Cardiff Castle, its Roman Origin.—In *Archaeologia*, LVII, 2 (1901), pp. 335–352 (6 pls.; 3 figs.), JOHN WARD describes Cardiff Castle and its fortifications. The Norman keep stands within an ancient Roman *castrum*. Part of the wall of the outer mediaeval fortification stands upon Roman foundations. The walls of different epochs are clearly distinguished.

CHRISTIAN ART

GENERAL AND MISCELLANEOUS

Symbolism of Liturgical Colors.—In the *Zeitschrift für Christliche Kunst*, R. P. JOSEPH BRAUN published a study on the symbolism of liturgical colors, indicating the occasions when white, red, black, violet, green, and yellow are used in the liturgy of the Roman Church, and the varying symbolic significance attached to the use of such colors. A résumé of this article is given by J. HELBIG in *R. Art Chré.* 1902, pp. 46–49.

The Mosaic with Representation of Orpheus.—The mosaic found near the Damascus gate at Jerusalem (*Am. J. Arch.* 1901, p. 366), in which Orpheus is represented, is published and discussed by JOSEF STRZYGOWSKI in *Z. D. Pal. V*, 1901, pp. 139–165 (pl.; 9 figs.). This mosaic with others recently found shows that there was artistic life in Syria in Christian times. The date is probably not after the fifth century. The representation is Christian, the figure of Orpheus being used symbolically. The two women, Theodosia and Georgia, are saints. The mosaic is in a Christian necropolis, and its symbolism refers to the future life. The resemblance of the ornamentation to that of woven fabrics is insisted upon. The greater part of the mosaic is an imitation of a carpet. Various works of art are cited in comparison. In an appendix P. J. DASHIAN (pp. 165–171) discusses the date of Armenian inscriptions at Jerusalem which are probably of the same period as this mosaic. He assigns them to the fifth century.

The Baptism of Jesus.—ADOLF JACOBY has investigated a fragment known under the title *ἐκ τῶν ἀποστολικῶν διατάξεων περὶ τῆς ἐπιφανείας τοῦ κυρίου*, which he finds is of Egyptian origin. Connected with this is a

narrative of the Baptism of Jesus. The study of these fragmentary relics of Egyptian belief in the fifth century after Christ, or about that time, leads to the discussion of other similar fragments and of representations of the Baptism in which the Jordan rises up as if to welcome the Lord. The illustrations are reprinted from other publications. (*Ein bisher unbeachteter apokrypher Bericht über die Taufe Jesu nebst Beiträgen zur Geschichte der Didaskalie der zwölf Apostel und Erläuterungen zu den Darstellungen der Taufe Jesu*, von ADOLF JACOBY, Strassburg, 1902, K. J. Trübner, 107 pp.; 8 figs. 8vo. 4.50 Mk.)

Jesus and St. John.—In *R. Arch.* XI, 1902, pp. 14-18, CECIL TORR calls attention to a number of early representations in which John the Baptist appears several years older than Jesus. This leads him to examine the dates assigned in the Gospels of Matthew and Luke to the births of John and Jesus. He finds that John was born under Herod (*i.e.* before 4 B.C., probably in 6 or 7 B.C.), and that Jesus was born at the time of the census, about 6 or 7 A.D., the time when John was received into the communion of Israel. If this is correct, Jesus may have been less than twenty-one years old at the time of the crucifixion. The stories of the Magi and the massacre of the innocents, were, if Torr's results are correct, originally associated with John, and afterward connected with Jesus.

The Primitive See of St. Peter.—In the *N. Bull. Arch. Crist.* 1901, pp. 277-290, O. MARUCCHI publishes several observations concerning the primitive see of St. Peter, which he identifies with the basilica of S. Silvestro in the cemetery of St. Priscilla on the via Salaria. A discovery of a second baptistery, in connection with this church, gives a new significance to the phrase *ad Fontes* in an inscription of the eighth century from this basilica. The square niche at the end of the apse, once richly adorned with mosaics, he thinks may be the *Sedes ubi prius sedit S. Petrus*. The early paintings of this cemetery also contain reminiscences of the preaching of St. Peter, one of them being an early Christian painting of a Pope seated upon a cathedral chair. Marucchi quotes Gatti, Lanciani, and Wilpert as having accepted his identification of this site as the primitive see of St. Peter.

Christian Inscriptions concerning the Catacomb of Domitilla.—In the *N. Bull. Arch. Crist.* 1901, pp. 233-255, O. MARUCCHI publishes a series of sixty inscriptions, which have been recently acquired by the Commissione di Archeologia Sacra and deposited in the building at the entrance of the Catacomb of Domitilla. Some of these inscriptions have been published by De Rossi, but most of them are now published for the first time.

Tombstone engraved with a Portrait of St. Paul.—In the *N. Bull. Arch. Crist.* 1901, pp. 257-258, G. WILPERT concludes that the tombstone recently discovered at S. Agnese, Rome (see above, p. 94), was originally engraved with two portraits, one of St. Peter and one of St. Paul, who were figured here as intercessors for the deceased. The portrait of St. Paul and the name of St. Peter are preserved. This monument is assigned to the first half of the fourth century.

Christian Monuments of Velletri.—In the *N. Bull. Arch. Crist.* 1901, pp. 269-276, G. SCHNEIDER gives a brief description of the Christian monuments of Velletri. He publishes several inscriptions, and mentions an

ancient Christian catacomb, an important Christian sarcophagus, and early frescoes in the apse and crypt of the basilica.

A Collection of Relics from Palestine.—In the ancient monastery of Farfa, in the Sabine territory, is a collection of relics from Palestine, twenty-eight in number, which are described by D. ILDEFONSO SCHUSTER in the *N. Bull. Arch. Crist.* 1901, pp. 259–268. These relics appear to have been gathered in Palestine toward the end of the seventh century.

The Sacred Sheet of Xabregas.—In *R. Arch.* XL, 1902, pp. 55–61 (2 figs.), F. DE MÉLY finds that the sacred sheet in the monastery of the Madre de Deus, at Xabregas, a suburb of Lisbon, is an imitation of the more famous one at Turin. The legend which connects it with the Emperor Maximilian I deserves no credence.

A Collection of Ancient Textiles.—MME. ISABELLA ERRERA of Brussels has published a volume descriptive of her valuable collection of ancient textiles. The collection is especially rich in Italian textiles of the fifteenth and sixteenth centuries, but contains examples of earlier work, such as Syrian, Byzantine, and Arabic textiles, ranging in date from the eighth to the twelfth century. Nine of these textiles are published in the appendix of *L'Arte*, 1902, pp. 1–8.

BYZANTINE AND MEDIAEVAL ART GENERAL AND MISCELLANEOUS

Byzantine Buildings in Macedonia.—In *C. R. Acad. Insc.* 1902, pp. 33–37, G. SCHLUMBERGER gives a brief report on the activity of Messrs. Chesnay and Perdrizet in Macedonia in the summer of 1901. At Salonichi they made views of the churches of St. Sophia and St. Demetrius, both of the seventh century; at Seres copies and photographs of the “communion of the Apostles” in the apse of the cathedral, and of several objects preserved in the churches, were made; at Melnick the Byzantine palace and several churches were studied.

A Byzantine Reliquary.—In *C. R. Acad. Insc.* 1902, pp. 67–71, G. SCHLUMBERGER publishes a note on a Byzantine reliquary in the village church at Eyne, near Oudenarde. On the pieces of the true cross, brought from the crusade by Gérard de Landas, who founded the church in 1171, is a plate of gold bearing a dedication to the Virgin in the name of the princess Maria Comnena, daughter of Alexis Comnenus, and sister of Anna Comnena.

Glass Painting in the Middle Ages.—A brief but useful article on glass painting in the Middle Ages is published by ÉMILE LAMBIN in the *R. Art Chré.* 1902, pp. 49–52. He classifies glass painting according to centuries, extending from the twelfth to the fifteenth, notes the successive changes which occurred during this period, and adds a classified list of cathedrals in which such paintings may be found.

The Worship of Saints in the Romanesque Period.—In the *R. Art Chré.* 1902, pp. 7–20, LÉON MAÎTRE publishes an interesting study entitled: ‘Le Culte des Saints sous Terre et au Grand Jour.’ He makes a special study of churches with crypts, drawing particular attention to those which were provided with *fenestellae* or small windows, by means of which the public might come into communication with the saint. He also draws attention to those churches which stand beside ancient springs.

ITALY

The Guilds of Florence.— Under the title: 'Les Arti de Florence,' in the *R. Art Chrét.* 1902, pp. 186–212, GERSPACH continues his study of the guilds of Florence. The present article is concerned with the work of such guilds for the Cathedral of Florence.

Santa Maria Assunta in Assergi.— In the Abruzzi mountains there are many churches of considerable interest which are as yet but little known. One of these is the church of Santa Maria Assunta in Assergi, which is described by IGNAZIO CARLO GAVINI in *L'Arte*, 1901, pp. 316–329, 391–405. The façade of the church was restored in the fifteenth century and the interior in the seventeenth century, but the crypt is a good example of twelfth century architecture. Even more interesting are the remains of the twelfth century pulpit. The churches of this region contain many fine pulpits of the twelfth and thirteenth centuries. One of these, in the church of Santa Maria Bominaco, is illustrated in this article. The portal, flanked by colonnettes with richly sculptured capitals and finely carved architrave, and the beautiful rose window of the façade are in style very similar to those of the church of Santa Maria Rosciolo, executed in 1446 by two sculptors named Johannes and Martinus. They recall the better known façade of the Church of Sant' Agnese at Aquila. In the interior of the church are several sculptured monuments and fine reliquaries of the fifteenth century, which contain the relics of San Franco, a hermit saint born at Roio in the neighborhood of Aquila.

The Architect of the Palazzo de' Consoli at Gubbio.— The architect of the well-known Palazzo de' Consoli at Gubbio is usually thought to have been Matteo di Giovannello, known also as Gattapone. This attribution, however, rests upon uncertain evidence. On the evidence afforded by an inscription found upon the portal, GIUSEPPE MAZZATINTI ascribes the design of the building to Angelo da Orvieto. (*Rassegna d'Arte*, 1901, pp. 187–188.)

Mediaeval Architecture in the Modenese Apennines.— In the *Memorie della Regia Accademia di scienze, lettere ed arti in Modena*, Serie III, Vol. II, 1900, the part devoted to the Section of Arts (67 pp.; 13 pls. 4to) contains a detailed and elaborate article by VINCENZO MAESTRI on several buildings of the Modenese Apennines. The parish church (pieve) of Rubbiano, built in the tenth century, a remarkable specimen of the Italo-Byzantine architecture just preceding the Romanesque, is treated in the greatest detail. Other buildings discussed historically and architecturally are the church of S. Lucia at Roffeno (tenth or eleventh century), the parish church of Castellarono (ninth century and later), the church of Quarantola (thirteenth century), the church of S. Lorenzo of Panico (tenth century), and the monastery of Montevoglio (tenth century and later). Various other buildings are mentioned, and among the illustrations are capitals and reliefs belonging to structures not discussed in detail. The treatise, with its numerous excellent illustrations, is a valuable contribution to the history of mediaeval Italian architecture.

Venetian Miniature Painters.— In the *N. Arch. Ven.* 1901, pp. 70–94, D. R. BRATTI has gathered considerable material concerning the miniature painters of Venice from the thirteenth to the nineteenth century. Inasmuch

as the early miniatures were not signed, such collecting and classifying of the names of miniature painters is important.

Notes from Sardinia. — In *L'Arte*, 1901, pp. 357–360, D. SCANO writes concerning the church of San Pietro delle immagini at Bulzi, and some fragments of a pulpit from the cathedral of Oristano. In both cases may be noted strong influences of the Pisan school, which flourished in Sardinia from the eleventh to the thirteenth century.

FRANCE

The Bell Tower of the Cathedral of Valence. — The old cathedral of Valence, constructed in 1095, is one of the interesting monuments of southern France. Not completely finished in the Romanesque period, it was provided with a spire in the Gothic period. This was removed in 1822, when the tower was completed in its original style. It was, however, struck by lightning and demolished in 1838. In the *R. Art Chrét.* 1902, pp. 31–40, FELIX and NOËL THIOLLIER publish this bell tower in a series of careful drawings, which include a large number of extremely interesting and archaic capitals.

The Inscriptions on Burgundian Belt-buckles. — In *R. Arch.* XL, 1902, pp. 350–371 (10 figs.), A. DE MOLIN discusses the inscription on Burgundian belt-buckles adorned with representations of Daniel in the lions' den and similar scenes in rude relief. These scenes symbolize the belief in the future life, and to this nearly all the inscriptions refer. The reading of the inscriptions, which were engraved by unlettered persons, is difficult and uncertain. The buckles date from the fifth and sixth centuries after Christ.

The Mediaeval Funerary Art of Burgundy. — In *Gaz. B.-A.* 1902, pp. 299–320, A. KLEINCLAUSZ contributes a second article on the funerary art of Burgundy in the Middle Ages. From the evidence furnished by existing engravings of various monuments, which are now destroyed, Kleinclausz contends that the art of sculpture in Burgundy during the Middle Ages was essentially French, and not altogether Flemish, as has been contended by Dehaisnes and other writers.

Matrix of the Seal of Foulques le Jeune, Count of Anjou, 1109–1144. — In the collection of Sig. C. Corvisieri of Rome is preserved a matrix of a seal representing a knight on horseback, inscribed:

SIGILLVM FVLCONIS ANDECAVORVM COMITIS.

The last three counts of Anjou are known as Foulques Nerra, 987–1040; Foulques le Réchin, 1060–1109; Foulques le Jeune, 1109–1144. In the *B. M. Soc. Ant. Fr.* 1899, pp. 304–338, by a careful study of the palaeography and style of execution of this seal, GEORGES DE MANTHEYER concludes that it was the seal of Foulques le Jeune, who, in 1131, became king of Jerusalem.

SPAIN

The Cathedral of Santiago de Compostelana. — A monograph on the Cathedral of Santiago de Compostelana is published by ADOLFO FERNANDEZ CASANOVA in the *Boletín de la Sociedad Española de Excursiones*, 1902, pp. 15–19, 34–46, and 60–66. He draws a careful comparison as to ground plan, elevation, proportions, and decoration between this church and that of St. Sernin at Toulouse. In spite of the strong resemblance between these

two churches, there are nevertheless important differences to be noted; the Spanish cathedral reflecting Byzantine, and the French church Latin influences. A history of the cathedral of Santiago, published by ANTONIO LOPEZ FERREIRO at Santiago in 1900, furnishes interesting data as to the date of this church. From his researches it appears that this Spanish cathedral was begun in 1074 or 1075 and completed in 1128, whereas St. Sernin of Toulouse was not begun until 1080 and not finished until 1535 or 1540. Casanova concludes that the Spanish cathedral represents the flower of architectural development upon Spanish soil, and is not to be considered a mere copy of a French church.

The Church at Bamba (Valladolid).—The Church at Bamba, near Valladolid, was restored in the thirteenth century, though built at an earlier period. VICENTE LAMPEREZ Y ROMEA gives the original and restored plans, as well as the elevations of this interesting church, in the *Boletín de la Sociedad Española de Excursiones*, 1901, pp. 252–256. The church is very plain on the outside, is terminated by three square apses, and in the interior has vaults and arches of the horseshoe form.

Santa Maria en el Castillo de Loarre.—In the *Boletín de la Sociedad Española de Excursiones*, 1901, pp. 221–224, VICENTE LAMPEREZ Y ROMEA describes the church of Santa Maria in the Castle Loarre. This is a Romanesque church of the twelfth century, of simple ground plan, with superposed arcades in the apse, and the central bay of the nave surmounted by a cupola. The circular base of this cupola is poised upon the four arches of the square bay by means of two superposed trumpet arches in each angle. The cupola is therefore one of the most interesting experiments in European architecture of the Romanesque period.

GERMANY AND AUSTRIA

The Influence of French Sculpture on German Sculpture in the Twelfth and Thirteenth Centuries.—The influence of French sculpture upon German sculpture in the twelfth and thirteenth centuries has been demonstrated by Bode, Dehio, Goldschmidt, and others. In the *Christliches Kunstblatt*, October, 1901, pp. 259 ff., KARL FRANCK describes a school of German sculptors in Franconia at the end of the twelfth century. This school, as well as those in Saxony and other parts of Germany, conformed to French methods in the thirteenth century. (*Chron. d. Arts*, 1902, pp. 124–125.)

A Bronze of the Time of Charlemagne.—In *Jh. Oesterr. Arch.* I. IV, 1901, pp. 189–203 (1 pl.; 14 half-tones; 5 cuts), JOSEF STRZYGOWSKI publishes a bronze ornament (*Bronzeaufsatz*) which he classes as a specimen of the art of the time of Charlemagne. From either side of a central pyramid extend S-shaped arms which terminate in panthers' heads. Above this, seated on a platform which rests upon the apex of the pyramid and the panthers' heads, are three seated figures of elderly men, two of whom hold writing tablets and the third an unfolded roll of writing. The bronze was most probably the terminal ornament of a staff or of a piece of furniture.

ENGLAND

Norman Fonts.—In *Reliq.* 1902, pp. 96–103 (6 figs.), ALFRED C. FRYER discusses some types of fonts in Cornwall. The fonts discussed are for the most part round bowls supported on pillars which have heads for capitals.

In two cases (at St. Breock's and St. Merryn's) the form is preserved from Norman times, but the decoration shows that the fonts are not earlier than the fourteenth century. The others are Norman. *Ibid.* 119-123 (5 figs.), two Norman fonts, at Toftrees and Sherborne, Norfolk, are published. They are square, supported by pillars. They are richly decorated with Norman scroll work.

Crypts in London Houses.—In *Archaeologia*, LVII, 2 (1901), pp. 257-284 (6 pls.; 4 figs.), is a paper by PHILIP NORMAN, entitled 'Sir John de Pulteney and his Two Residences in London, Cold Harbour, and the Manor of the Rose, together with a few remarks on the Parish of St. Laurence Poulteney.' Sir John was four times mayor of London in the fourteenth century. The paper contains some interesting remarks on mediaeval architecture, and some good illustrations of vaulted crypts in London houses.

The Library of Wells Cathedral.—In *Archaeologia*, LVII, 2 (1901), pp. 201-228 (4 pls.; 1 fig.), C. M. CHURCH describes the library in the cloister of Wells cathedral and sketches its history from about 1240 A.D.

The Origin of Gothic Architecture.—In the *Journal of the Royal Institute of British Architects*, Vol. VI, pp. 289 ff., JOHN BILSON published a noteworthy article entitled: 'Norman Vaulting in England.' This was translated into French and published in the *R. Art Chrét.* 1901, pp. 365-393 and 463-480. In it Bilson held that the development of Gothic architecture in the twelfth century was more rapid under the Normans in England than it was in the Ile-de-France. The COMTE DE LASTEYRIE made an address before the Société des Antiquaires de Normandie at Caen, in which he called attention to the importance of the studies made by Bilson, and, at the same time, criticised his conclusions. This address and a reply to it by Mr. Bilson are published in the *R. Art Chrét.* 1902, pp. 213-223. The vaults of the cathedral of Durham formed the principal basis for the discussion. This cathedral must, therefore, be more carefully studied than ever before.

The Heraldic Glass in Great Malvern Priory Church.—In *Archaeologia*, LVII, 2 (1901), pp. 353-358 (3 colored pls.; 1 fig.) ROWLAND W. PAUL describes what is left of the colored glass of the fifteenth and sixteenth centuries in Great Malvern Priory Church. This glass is unsurpassed in England for beauty and interest. Far the greater part is destroyed. In the parts preserved the representations are chiefly kneeling figures and coats of arms.

RENAISSANCE ART ITALY

The Architect of the Cancelleria at Rome.—The design for the Palace of the Cancelleria at Rome has since the days of Vasari been attributed to Bramante. This attribution has been questioned in recent years, especially by D. Gnoli. Recently E. BERNICH published in *Napoli Nobilissima* (Vol. VII, fasc. 12) a letter indicating that the miniature painter, Gaspare Romano, turned his attention to architecture, and was employed upon the palace of the Cardinal di S. Giorgio, which afterwards became that of the Cancelleria. Bernich concludes, therefore, that Gaspare Romano and not Bramante was the architect. This recalls the statement of Vasari that Bramante was engaged upon this palace . . . *con altri eccellenti architettori*. A new document, hitherto inedited, is published by D. GNOLI in

Rassegna d' Arte, 1901, pp. 148-150, in which the name of Bastiano da Bologna is mentioned as the architect of this palace. Bastiano seems also to have been associated with Giacomo da Pietrasanta in building the church of S. Agostino, about this period. It is not impossible, therefore, that Pietrasanta was associated with Bastiano in the building of this notable palace. In the *Rassegna d' Arte*, 1901, p. 186, C. DE FABRICZY suggests that the architectural work undertaken by the miniature painter, Gaspare Romano, was not for the palace of the Cardinal di S. Giorgio in Rome, but for a house built for this same cardinal in Naples.

The Cappella di San Teodoro.—It has usually been assumed that the Cappella di San Teodoro, designed by Bramante in connection with the Church of Santa Maria near S. Satiro, was never built. Documentary evidence, however, has been found to show that this chapel was, in fact, begun in 1498, left unfinished on the departure of Bramante from Milan, but completed under another name during the years 1511-1514 at the expense of Francesco Brivio. This chapel forms, in fact, the right transept of the Church of S. Maria near S. Satiro, and is published by LUCA BELTRAMI in *Rassegna d' Arte*, 1901, pp. 100-103.

Porta Stanga from Cremona in the Louvre.—One of the most elaborate of Renaissance doorways, the Porta Stanga, was sold to a Frenchman in 1870 and is now in the Louvre at Paris. The sculptor of this doorway has not hitherto been known. In *Arte e Storia*, 1901, pp. 155-157, Cav. LUIGI LUCHINI publishes a letter from Giancristoforo Romano to the Marchesa Gabrella d' Este Gonzaga, from which he infers that Giancristoforo was the sculptor of this notable doorway. This attribution is not admitted by ALFREDO MELANI, who, in *Arte e Storia*, 1902, pp. 4-5, compares the Porta Stanga with the Mausoleum of Giangaleazzo at the Certosa di Pavia. This monument at Pavia bears the signature of Giancristoforo Romano. From this Melani argues that, if he had been the sculptor of the Porta Stanga, his signature would have been found on this monument also.

The High Altar of the Cathedral of Modena.—In the side chapel in the Cathedral of Modena there has been reërected a very interesting terracotta altarpiece which once graced the high altar. In style it is transitional between Gothic and Early Renaissance forms. It is assigned by MARCEL REYMOND, in *Gaz. B.-A.* 1902, pp. 55-64, to the School of Niccolò d'Arezzo, about 1430. He observes that the pilasters of this altarpiece have but three channelings, and presents a series of dated monuments of the fifteenth century classified according to the number of channelings of their pilasters. According to this table, it would appear to have been customary to increase the number of channelings on such monuments from two or three to six, seven, or even eight during the course of the century. The sculptures of this altarpiece resemble those of the Pellegrino Chapel at Sant' Anastasia in Verona.

A Design by Michelangelo for the Façade of S. Lorenzo in Florence.—In the *Rassegna d' Arte* for May, 1901, LUCA BELTRAMI published a sketch by Michelangelo for the façade of S. Lorenzo at Florence. The authenticity of this sketch was questioned by PASQUALE NERINO FERRI in *Arte e Storia*, August 20, 1901. Ferri laid stress upon the signature, which he declared to be in the handwriting of Bastiano da Sangallo. In the *Rassegna d' Arte*, 1901, pp. 132-133, Beltrami refuses to accept the con-

clusion of Ferri, and holds to his original position that the sketch was by Michelangelo himself, although the signature may have been added by Sangallo when the sketch came into his possession.

This drawing is also discussed by H. DE GEYMÜLLER in *Rassegna d'Arte*, 1901, pp. 184-186. Geymüller believes with Ferri that the drawing is to be attributed not to Michelangelo, but to Bastiano, known also as Aristotile da Sangallo. His arguments, however, do not succeed in convincing Beltrami.

The Colossal Bronze Horse's Head at Naples.—The well-known colossal head of a horse in the Museum at Naples has long been discussed by art critics and archaeologists. According to Comparetti, this horse's head is of classical workmanship. This view is maintained by several Italian scholars. On the other hand, Vasari attributed it to Donatello, who made for King Alfonso of Aragon an equestrian statue somewhat similar to the Gattamelata in Padua. This view is maintained by A. FILANGIERI DI CANDIDA in *Arte e Storia*, 1901, pp. 127-128.

A Relief by Verrocchio.—In the Museum of the University at Perugia there is a bronze relief representing the Martyrdom of St. Sebastian ascribed to Vincenzo Danti. The style of the workmanship, however, is evidently earlier than the time of Vincenzo and is thought by VENTURI to be that of Verrocchio. He publishes it in *L'Arte*, 1902, p. 43.

The Lavabo in the Certosa at Pavia.—In the Certosa is an imposing, finely sculptured Lavabo, attributed to Alberto Maffiolo da Carrara. The monument, however, as has been shown by DIEGO SANT'AMBROGIO, is not by a single hand. The monument, in general, may be correctly attributed to Alberto Maffiolo da Carrara, but the reliefs in the background appear not to have been designed for this monument and are the workmanship of some other sculptor. The contract made with Alberto for this Lavabo is published in *Rassegna d'Arte*, 1902, pp. 13-15. It contains a provision that the contract might be terminated at the option of the monks, who appear not to have been altogether satisfied with Alberto's work.

Adriano Fiorentino.—In the *Anonimo Morelliano*, mention is made of Adriano Fiorentino who cast the group of Bellerophon and Pegasus modelled by Bertoldo di Giovanni. Such a group was found by Courajod in the Museum at Vienna, signed: *Expressit me Bertoldus, conflavit Adrianus*. In the Museum at Dresden, there is a bronze bust of Frederick the Wise which is signed: *Hadrianus Florentinus me faciebat, Anno Salutis 1498*. In the exposition of metal work held at Nuremberg in 1885 there was exhibited a group of Venus and Cupid which was signed: *Hadrianus me f(aciebat)*. A replica of this Venus exists in the collection of M. Foulo in Paris with the same artist's signature. C. DE FABRICZY in *L'Arte*, 1901, pp. 415-417, argues that these signatures all refer to the same individual, to whom he also ascribes a medallion of Degenhart Pfeffinger in the numismatic collection at Gotha and a medallion of Ferdinand II. The medallions, although not signed, show the same characteristics of style as the bust. Documentary evidence in the archives at Florence shows that this sculptor was in 1493 in the service of Ferdinand I, and that he died in Florence and was buried in Santa Maria Novella, June 12, 1499.

A Terra-cotta by Fra Mattia Della Robbia.—Sig. Astolfi di Macerata has recently become possessed of a terra-cotta representing the Last Supper, which he attributes to Fra Mattia Della Robbia. It resembles in

style three reliefs in the Museo Civico di Ripatransone representing the Annunciation, the Adoration of the Magi, and the Dispute with the Doctors. This relief came from a hamlet in the vicinity of Montecassiano, where there is a fine altarpiece by Fra Mattia executed in the year 1527. (*L'Arte*, 1901, pp. 425-426.)

The Gallery of Paintings at Urbino.—EGIDIO CALZINI, the author of *Urbino e i suoi monumenti*, contributes to *L'Arte*, 1901, pp. 361-390, an article on the Gallery of Urbino. He publishes here a polyptych signed by Joannes Barontius of Rimini in 1362, also a series of paintings by Paolo Uccello, the important painting by Justus of Ghent representing the Communion of the Apostles, six paintings by Giovanni Santi, two by Timoteo Viti, and two by Titian, as well as several other paintings by other artists. He also publishes two interesting busts ascribed to Donatello or his school.

Paintings in the Museo Civico in Pavia.—The paintings in the Museo Civico at Pavia are not well known, although they include interesting examples of the old Italian masters. A brief account of this collection is given by GIORGIO BERNARDINO in *Rassegna d'Arte*, 1901, pp. 151-154, wherein he publishes a Madonna by Giovanni Bellini, a male portrait by Antonello da Messina, a portrait of a woman by Bernardino de' Conti, and a portrait of Cardinal Pietro Bembo by an unknown painter.

Paintings at San Marino.—The Republic of San Marino produced only one noted artist, Giovanni Battista Belluzzi, the military architect who lived from 1506-1554. Nevertheless, there are there to-day many paintings by the old masters. In the *Rassegna d'Arte*, 1901, pp. 129-132, CORRADO RICCI indicates that many of these paintings are wrongly attributed. The two paintings, which he publishes, by Girolamo Marchesi da Cotignola, show in an interesting manner the development of that artist, who at first was strongly influenced by Melozzo da Forlì and later modified his style when he had seen the works of Raphael.

San Giacomo Della Marca.—The representations of San Giacomo are not always easily to be distinguished from those of San Bernardino da Siena. Some of the distinguishing traits of San Giacomo, however, are brought out by CESARE CESARI in the *Rassegna d'Arte*, 1901, pp. 178-180. Both saints are clad in Franciscan garb and have the sacred wafer inscribed with the monogram of Christ, but San Giacomo ordinarily carries an ampulla containing the blood of Christ. San Giacomo may be thus distinguished in a painting by Crivelli, representing the Madonna and Saints, in the Berlin Museum.

Masolino da Panicale.—In *Gaz. B.-A.*, 1902, pp. 89-99, B. BERENSON makes several additions to the list of works by Masolino. One is an Annunciation, at Gosford House, Scotland; another, a Madonna in the Art Gallery of Bremen; a third, a very interesting fresco of a landscape, in the Castle at Castiglione d'Olona. These he expects to publish at some future date, when photographed. He also assigns to Masolino a Madonna and Child in the Gallery at Munich, which is there catalogued simply as Florentine, and publishes two frescoes at Empoli—one of a Madonna and Child between two angels, the other a Pietà—which he assigns to the same master.

An Early Lombard Fresco.—FRANCESCO MALAGUZZI publishes in *Rassegna d'Arte*, 1901, pp. 99-100, a fresco removed from the Church of S. Primo at Pavia to the house of Sig. Grandi at Milan. It represents the

Coronation of the Virgin in the presence of saints, and had been attributed by Morelli, Crowe, Cavalcaselle, and others, to Zenale. Malaguzzi, however, recognizes in this painting the characteristics of Bernardo Butinone of Treviglio.

The Art of Bonfigli.—Broussolle, in his recent work entitled *La Jeunesse du Pérugin*, contrasts the style of Bonfigli with that of Perugino. According to Broussolle, Bonfigli represented the terrors of mediaevalism, in contrast with which the work of Perugino was tender and gentle. This statement is not thought to be just by O. SCALVANTI, who mentions several processional standards by Bonfigli in which his humanity and tenderness are well illustrated. (*Rassegna d'Arte*, 1901, pp. 154-156.)

Quiricio da Murano.—With the exception of the Vivarini, the painters from Murano did not become famous. Some interest is revived in the early history of this school by the recent acquisition, by the Gallery at Venice, of a signed painting by Quiricio da Murano. This painting is published, together with an interesting account of its history and of other works by Quiricio da Murano, by PIETRO PAOLETTI FU OSVALDO in *Rassegna d'Arte*, 1901, pp. 129-143.

A Miniature Altarpiece by Pesellino.—In *R. Arch.* XL, 1902, pp. 191-195 (pl. vi.), B. BERENSON publishes and ascribes to Pesellino a small altarpiece at Empoli, usually ascribed to Masaccio. The picture represents the Madonna and Child surrounded by angels.

Botticelli or Chimenti di Piero.—In the Accademia at Florence is a well-known painting representing Tobias and the three Archangels, there attributed to Botticelli. Modern criticism, however, refuses to admit this attribution. Bode considers the painting an early work of Verrocchio. Mackowsky in a recent volume on Verrocchio assigns it to Francesco Botticini. A new attribution is given by JACQUES MESNIL in *Gaz. B.-A.*, 1902, pp. 252-256. In tracing the history of the painting, he finds that in 1470-1471 Chimenti di Piero, hitherto unknown in the history of painting, was commissioned to paint the curtain which hung before the painting and to gild its frame. It appears that this Chimenti di Piero was at the time the most accomplished painter in the Company of the Archangel Raphael, at whose expense the painting was placed in the Church of Santo Spirito. The books of this company also indicate that Chimenti di Piero had a son named Raphael Tobias. These facts taken together seem to indicate that Chimenti di Piero was himself the author of the well-known painting.

A Sketch by Leonardo da Vinci.—DIEGO SANT' AMBROGIO publishes in *Arte e Storia*, 1901, pp. 139-140, a sketch, by Leonardo da Vinci, of the head of the Virgin in the Madonna at the Grotto at Affori. The sketch belongs to Cav. Aureliano Albasini Scrosati of Milan. It is in pastel, on paper of the same size and quality as the studies of the apostles' heads in the Last Supper which are now at Weimar. In the estimation of Diego Sant' Ambrogio, it is more perfect in execution than other sketches of female heads by Leonardo, preserved at Christ Church, Oxford, and in the collection of the Duke of Devonshire at Chatsworth.

A Drawing by Michelangelo for the Last Judgment.—In the Santarelli collection in the Department of Engravings of the Uffizi, there are thirteen drawings attributed to Michelangelo, only one of which is

thought to be genuine by PASQUALE NERINO FERRI. This is a sketch of the figure of Christ and a few of the surrounding figures for the Last Judgment of the Sistine Chapel. This drawing is published for the first time in *Rassegna d'Arte*, 1901, pp. 177-178.

A Monument to Virgil.—In view of the proposition to erect a national monument in honor of Virgil at Mantua, LUCA BELTRAMI contributes an article in *Rassegna d'Arte*, 1901, pp. 145-148, in which he publishes a drawing by Raphael representing the poet, also a design made by Mantegna for a monument to Virgil, and the mosaic found in 1896 at Susa, Tunisia.

Amor and Psyche in the School of Raphael.—At a meeting of the German Archaeological Institute in Rome, on January 11, Dr. STEINMANN discussed the representations of the fable of Amor and Psyche in the school of Raphael. He threw some new light on the paintings of Raphael's pupil Pierin del Vaga in the Appartamento Papale of the St. Angelo. The eight pictures give the story of Amor and Psyche as related by Apuleius, and correspond in a surprising manner with the incomplete representations by Raphael himself on the roof of the garden salon of the Farnesina. Dr. Steinmann conjectures that Raphael originally intended to paint frescoes on the walls of the garden salon which should represent the earthly events in the legend, while the passages which had Olympus as their scene were to adorn the roof. He believes that the charming work of Pierin del Vaga was painted after the sketches provided by the master for the adornment of the walls of the Farnesina. (*Athen*. February 1, 1902.)

Frescoes by Sodoma at Subiaco.—In *Sitzb. Sächs. Ges.* 1901, III, pp. 75-88, A. SCHMAROW describes a series of frescoes in a chapel of the Church of S. Francesco at Subiaco. The chief scenes are the birth of Mary, her espousals with Joseph, the birth of Christ (altarpiece), and the crucifixion. Lesser scenes, treated as a frieze below the others, are the adoration of the Magi, the Maries at the sepulchre, and some satyrs and other bacchic figures. The relation of these paintings to Melozzo da Forlì, Perugino, and other artists of the fifteenth century, as well as to Raphael, are discussed. They are ascribed to Sodoma, and the date is fixed at 1509. Sodoma's relation to Raphael is discussed, and his works at Monteoliveto and elsewhere are compared. These faded frescoes at Subiaco are all that remains, with the exception of parts of the decorative work in the Stanza della Segnatura, from Sodoma's sojourn at Rome at that time. The frescoes are published in the volume for 1901 of the *Kunsthistorische Gesellschaft für photographische Publikationen*.

The Pupils of Francia.—In *Rassegna d'Arte*, 1901, pp. 134-139, FRANCESCO MALAGUZZI contributes an article on the School of Francia, in which he enumerates a number of painters who belonged to this school, and also publishes a series of documents of importance for the detailed study of the history of painting at Bologna in this period.

The Birth of Titian.—It is usually assumed that Titian was born in 1477 and died in 1576. The date of his death is accurately known; that of his birth is inferred from a letter which he wrote to Philip II, in 1571, in which he speaks of himself as then ninety-five years of age. Notwithstanding this statement on the part of Titian himself, HERBERT COOK in the *Nineteenth Century* for January, 1902, prefers to accept the statement of

Lodovico Dolce that Titian was hardly twenty years of age when he assisted Giorgione on the frescoes of the Fondaco dei Tedeschi. As these frescoes were made between 1507 and 1508, Titian's birth, accordingly, should be set at 1487 or 1489, and not as early as 1477. This somewhat later date for the birth of Titian seems also to be substantiated by statements of Vasari.

An Early Work by Cola di Amatrice.—In the communal gallery at Ascoli, there is a painting which represents S. Bernardino da Siena. This painting has been ascribed by Carducci and by Gabrielli to Carlo Crivelli. In the *Rassegna Bibl. Arte Ital.* 1901, pp. 26–31, E. Calzini shows, by a careful analysis of the painting, that the author of it was not Carlo Crivelli but his pupil Nicola Filotesio, known also as Cola di Amatrice.

New Paintings by Correggio.—In *L'Arte*, 1901, pp. 310–315, VENTURI adds several paintings to the list of works by Correggio. One of these is a fresco attributed to Antonio Bartolotti, now in the Gallery at Modena. In this fresco he recognizes the influence of Mantegna and of Bianchi-Ferrari. If the new attribution be correct, this fresco, which is dated 1511, will rank as the earliest work by Correggio. Another important addition to the list is that of the Christ-child asleep, recently exhibited in the Guild Hall, London, and there attributed to Murillo. In this painting, which belongs to the Duke of Westminster, Venturi recognizes many characteristics of Correggio's handiwork. A third painting represents Sant' Antonio Abate and is in the church of the Gerolamini at Naples, where it is attributed to Andrea da Salerno.

New Drawings by Correggio.—In *L'Arte*, 1902, pp. 21–30, GUSTAVO FRIZZONI publishes several drawings by Correggio which have hitherto escaped attention. One of these, a charming head, is in a private collection at Milan. This was evidently the study for one of the youths painted in the cupola at Parma. A second drawing, in a private collection at Berlin, represents three infants. This appears also to have been one of the preliminary studies for the frescoes at Parma. The third drawing is a sketch of 'La Madonna col San Giorgio.' It is in the collection of engravings at Dresden. A fourth sketch, the Adoration of the Shepherds, has been already published by Arthur Strong in his reproductions of drawings in the collection of the Earl of Pembroke and Montgomery at Wilton House. A fifth sketch of two *putti* is from a private collection in Rome.

New Facts concerning Vincenzo Foppa.—In *Athen.* February 15, 1902, C. JOCELYN FROULKES discusses a number of documents relating to Vincenzo Foppa. He concludes that Vincenzo was probably born at Brescia, not earlier than 1427, and that he may have lived until 1514 or 1515, though the notices after 1502 are not to be relied upon implicitly.

The Date of the Death of Bernardino Luini.—A document recently discovered in Lugano and published by EMILIO MOTTA shows that by July 1, 1532, Bernardino Luini was already dead. Inasmuch as records exist of payments made to him, for his work at Saronno, on August 2, 1531, it follows that his death must have occurred between these two dates. He would seem to have been still a young man when he died, since his earliest dated work is of the year 1512. (*L'Arte*, 1901, p. 353.)

The Will of Andrea Bregno.—In *Artisti lombardi*, II, p. 299, Bertolotti speaks of the will of a certain "Magister Andrea de Brignonibus." This

is certainly the same individual as Andrea Bregno di Osteno, inasmuch as the names of his wife and of his executor mentioned in the will are the same as those mentioned on his sepulchral slab in the Church of Santa Maria sopra Minerva. This will is published in full in *L'Arte*, 1901, p. 418.

A Group by Guido Mazzoni.—An apparently forgotten group by Guido Mazzoni is recognized by VENTURI in the Church of San Giovanni Evangelista at Reggio d'Emilia. Here, besides the Virgin and the dead body of Christ, appear St. Joseph of Arimathea, Nicodemus, St. John, the Magdalen, and the holy women. (*L'Arte*, 1901, p. 357.)

Three Inedited Paintings by Palmezzano.—In the *Arch. Stor. d. Art.* 1894, Calzini published at length an account of the works of Marco Palmezzano. To the list of his works three paintings are added by G. GARNIER in *Rassegna d'Arte*, 1901, pp. 104-105. These are an Annunciation in the Lateran, an Annunciation at Carpi near Modena, and a Madonna with Saints at Ravenna.

Miniatures of the Documenti d'Amore.—The Documenti d'Amore of Francesco da Barberino has received considerable attention from various literary critics. The poem is most interestingly illustrated by the poet himself with miniatures which are coördinate in value with the text. These miniatures are studied in detail by FRANCESCO EGIDI in *L'Arte*, 1902, pp. 1-20.

Fra Antonio da Monza.—Fra Antonio da Monza was one of the best Lombard miniature painters of the fifteenth century. A list of his miniatures is published by PAUL KRISTELLER in *Rassegna d'Arte*, 1901, pp. 161-164. To this list Kristella adds a number of engravings very similar in style, but with interesting variations of detail. He therefore concludes that Fra Antonio was not merely a miniature painter, but an engraver also, his work in miniature painting having prepared him for the fine detailed work required by the engraver's art.

Pietro Vanini, the Goldsmith.—Pietro Vanini, who in 1379 became the Bishop of Osimo, was prior to that time a goldsmith of remarkable skill. A beautiful cross, still preserved in the Cathedral at Osimo, is signed "*Petrus Vansini de Eculo f.*" In *Arte e Storia*, 1901, pp. 79-80, C. COSTANTINI draws attention to the fact that in the Collegiate Church at Monte Cassiano, not far from Osimo, there is a beautiful cross signed: *Lauventius de Esculo feci. M. CCCC. XIII*, and expresses the desire that the two crosses should be published together. This would doubtless throw light upon the goldsmith work at Ascoli during the fourteenth and fifteenth centuries.

A Triptych by Gérard David.—In the Cathedral of Cagliari there is a triptych said to have been taken from the room of Clement VII in the Vatican. This triptych has been variously ascribed to Fra Angelico, to the school of Raphael, etc. It is, however, a Flemish painting of the school of Memling, and in style corresponds to the works of Gérard David. The tradition that it was removed from the Vatican is also substantiated by a document in the Vatican archives of the time of Clement VII, which contains a description of the painting, now published together with the document in *L'Arte*, 1901, pp. 419-420.

FRANCE

Three New Works by Jean Bourdichon.—Jean Bourdichon, one of the best of the painters of the early French Renaissance, became lost to view until about sixty years ago. Since then it has become known that he was born in 1457; that he lived at Tours; that he was painter to Charles VIII, to Louis XII, and to François I; and that he died in 1521. In 1868, a document was discovered showing that he painted the miniatures of the famous Book of Hours of Anne of Brittany, now in the Bibliothèque Nationale. In examining the illustrated manuscripts of the fifteenth and sixteenth centuries in the Bibliothèque Nationale, ÉMILE MALE has discovered three in which he recognizes the handiwork of this distinguished painter. One of these is the Latin manuscript, No. 10532, known as the Hours of Aragon or Ferdinand I, King of Naples. The second is the Latin manuscript, No. 886, a Missal, made for Martin de Beaune, Bishop of Tours, 1520–1527. The third, a Latin manuscript, No. 1370, may be known as the Book of Hours of Charles VIII. A careful comparison of the miniatures of these three manuscripts with those of the Hours of Anne of Brittany shows that they are all by the same hand. They are classed chronologically by Male in the following order: (1) Hours of Aragon, not later than 1494; (2) Hours of Charles VIII, not later than 1498; (3) Hours of Anne of Brittany, finished in 1508; (4) The Missal of Tours. These manuscripts are described by Male in *Gaz. B.-A.* 1902, pp. 185–203.

A Painting by Fiorenzo di Lorenzo in the Louvre.—Morelli remarked that outside of Italy Fiorenzo di Lorenzo was not represented in the public galleries, with the exception of that at Frankfort. In the Museum of the Louvre, however, there are three panels attributed to Pesellino and representing the scenes in the life of a bishop. These panels are considered by VENTURI to give every indication of being early work by Fiorenzo di Lorenzo. (*L'Arte*, 1901, p. 346.)

The Tomb and Portraits of Philibert de Châlons.—Philibert de Châlons, Prince of Orange, Duke of Gravina, Count of Tonnerre and Penthievre, Viceroy of Naples, Lieutenant-General of the Emperor of Italy, Governor of Burgundy, is remembered in the little church at Lons-le-Saunier by a simple epitaph. His mother, Philiberte de Luxembourg, ordered for him an imposing tomb to be made by the Florentine sculptor, Giovanni Battista Mario, and the Flemish sculptor, Conrad Meyt. This tomb was to have been elaborately decorated with statues, some of which were made, but the monument was never completed or put in place. Some of the statues designed for this tomb were seen as late as 1637, but their whereabouts is now unknown. The personal appearance of Philibert de Châlons is preserved to us in engravings in the Bibliothèque Nationale at Paris and at the Musée Condé at Chantilly. These are published by ULYSSE ROBERT in the *B. M. Soc. Ant. Fr.* 1899, pp. 289–304.

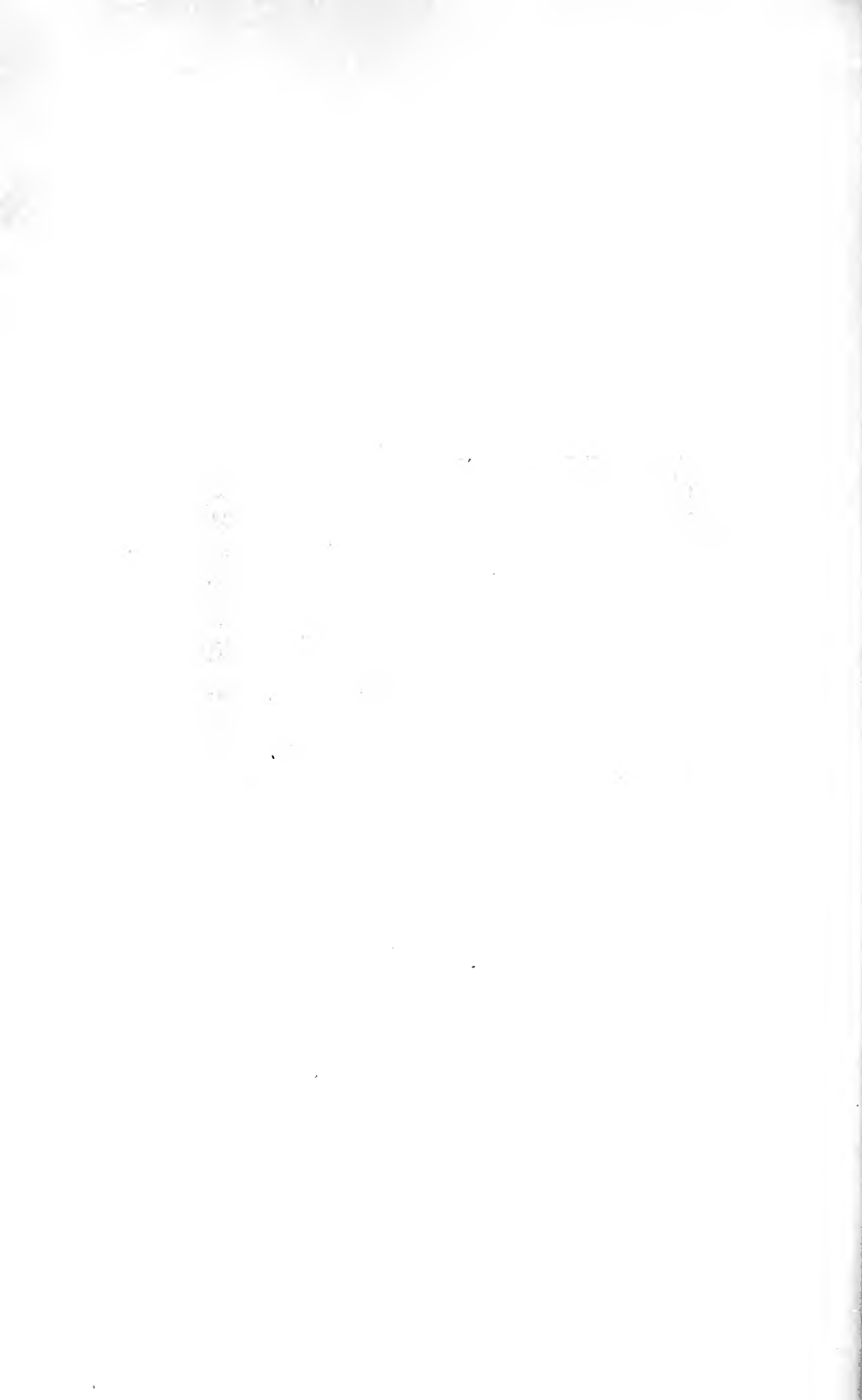
The Tapestries at Fontainebleau representing the Victories of Charles VII.—Some doubt has been thrown upon the statement of earlier writers concerning the Château de Fontainebleau to the effect that the victories of Charles VII were represented on the walls and ceilings. The Bibliothèque Nationale has recently acquired a manuscript of Peiresc which gives a description of one of the tapestries at Fontainebleau which

represented the Victory of Charles VII at Formigny. This manuscript is accompanied by a drawing by Jean Gobert and is dated 1621. The question, therefore, may be considered settled that at Fontainebleau there was a series of tapestries representing the Victories of Charles VII. This interesting drawing is published by HENRI STEIN in the *B. M. Soc. Ant. Fr.* 1899, pp. 174-188.

ENGLAND

Joris Hoefnagel. — In *Archaeologia*, LVII, 2 (1901), pp. 321-330 (1 pl.), PHILIP NORMAN gives a sketch of the life and works of the Flemish painter, Joris Hoefnagel (1545-1600), and publishes an allegorical painting in miniature now belonging to Miss Isabel Akers. The subject is a contest between force and cunning for wealth and honors.





CC
1
A6
ser. 2
v. 6

American journal of
archaeology

**PLEASE DO NOT REMOVE
SLIPS FROM THIS POCKET**

**UNIVERSITY OF TORONTO
LIBRARY**
